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WELLINGTON NURSERIES

WORDEN & COMPANY, Proprietors

Established 1867

WELLINGTON, KAN.



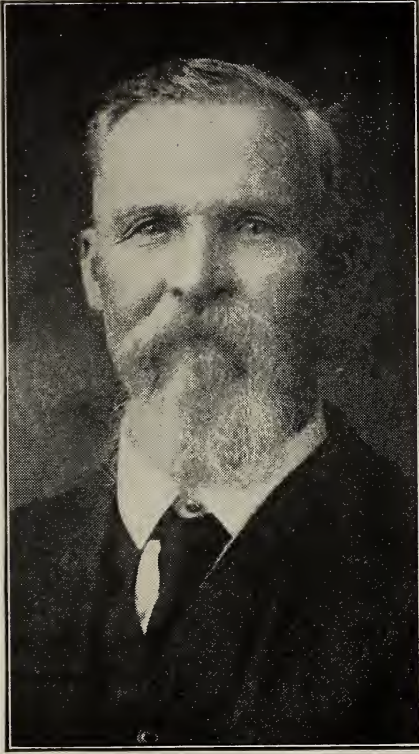
Read "To the
Buyers of Nursery
Stock" on Next Page

NEW FRUIT BOOK AND PRICE LIST

Fruit and Ornamental Trees, Fruit Plants,
Shrubs, Vines and Roses

Hardy Qualities That Have Proven Their Value—a Specialty.

To Buyers of Nursery Stock



Charles Worden

If you had carried on a successful business for fifty years, with thousands of your customers re-ordering each year, you would think you were giving good service, wouldn't you?

That is just our position. Just a half century ago the Nurseries of Worden & Co. began in a small way, always earnestly trying to satisfy our friends and give them only the best stock that experience, pains, and care could grow.

As a result we have had a remarkable growth. This has not been a mushroom growth, but it has been the result of square-dealing and always doing our utmost to give satisfaction.

We are absolutely certain that the trees we send to our customers are O. K. in every way. From the size of our business and the confidence reposed in us by our friends it is quite evident that our policy is the right one.

We want to serve you. We want to help you to greater success and more money from your trees. Look over this catalogue; select the varieties you want, and send your order today. Use the enclosed order blank.

REFERENCES—Security State Bank, Wellington National Bank, or any mercantile agency.

FREIGHT or EXPRESS—We deliver to freight or express office, and f. o. b. cars free, and no charges are made for packing.

TERMS—Cash must accompany all orders amounting to \$25.00 or less. We will ship larger orders C. O. D. providing 25 per cent of the total amount of your order is sent in cash. If the

order is shipped by express, you pay the balance to your express agent upon delivery of the goods. If the order goes by freight, you pay the balance at your bank, where you will also find the bill of lading which you present to your freight agent who will deliver shipment to you.

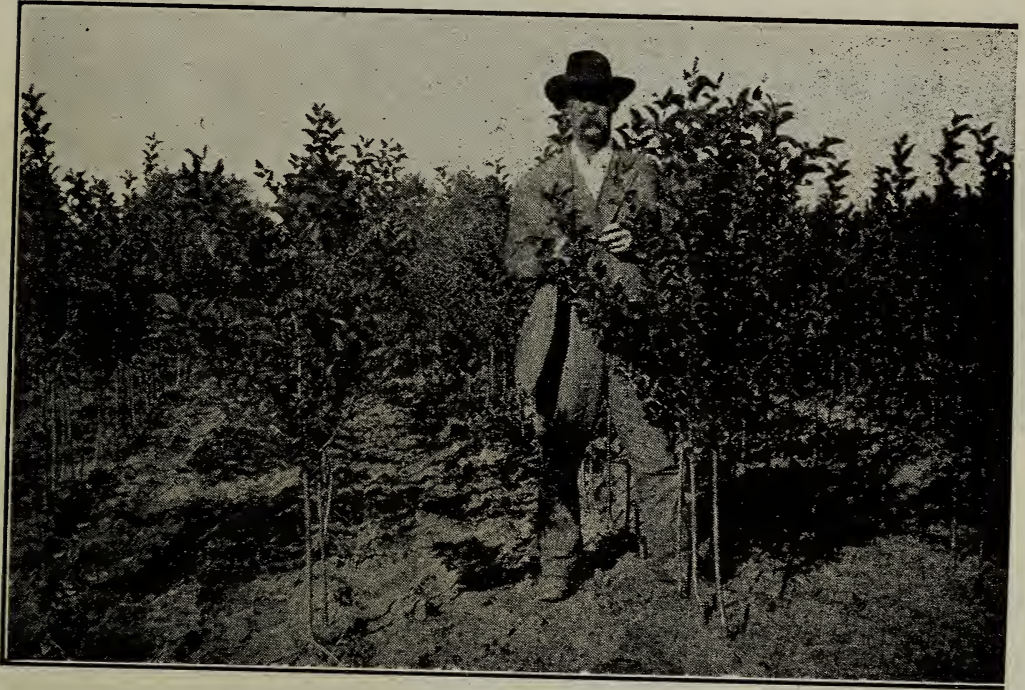
REMIT by postoffice or express money order, registered letter, draft or check. Our stock is as good as can be grown.

OUR PACKING is done in the best possible manner in boxes and bales by experienced people. The roots are packed in moss or excelsior, and straw to protect the tops, and will reach our customers in good condition no matter how great the distance. We save you money by selling direct, and if ordered early you can depend on the stock reaching you in prime condition. Use order sheet in making out your order, and fill it out carefully. Write name, postoffice, freight station, and express office plainly.

EXPRESS RATES—Trees and plants now go by express at a discount of 25 per cent from regular merchandise rates, so it is best, quickest, and cheapest to order by express. Large orders should go by freight—but all plants should go by express or parcel post.

PARCEL POST RATES—We quote no special rates. When ordering remit according to prices quoted, and we will ship by parcel post if ordered by you to do so and will instruct your postmaster to collect from you on delivery of goods the actual cost of mailing.

WE STRIVE TO AVOID MISTAKES—But in the event that any nursery stock sold by us should prove untrue to name under which it is sold, we hereby agree, on proper proof of such untruthfulness to name to replace the original order, or to refund



We Grow the Trees We Sell. Notice Well Spread Two-Year Apple Trees Above

the purchase price. Except for such liability, and in respect to all nursery stock sold by us, we give no warranty, express or implied, as to description, quality, growth, productiveness or any other matter.

We do not replace trees or plants that fail to grow, at our low prices, but guarantee stock to leave our hands in first-class condition.

WE ACCEPT LIBERTY LOAN BONDS, Thrift Stamps, and War Saving Stamps at face value in payment for nursery stock.

Please state if we may substitute in case we are out of some varieties you may want, and we will send equally as good, and in many cases better stock than ordered, as we know some varieties to be fine that you may not be acquainted with.

SHIPPING—Our digging and shipping season begins in the spring in February, and continues until May; in fall about October 15th, until hard freezing weather sets in.

WHEN TO ORDER—Order on receipt of this catalogue, or as soon as possible, the earlier the better. Use the order sheet, fill it out carefully and write plainly to avoid mistakes.

Wellington Nurseries, :: Wellington, Kansas

ENTOMOLOGICAL COMMISSION OF KANSAS

Office of State Entomologist, University of Kansas.

Certificate of Nursery Inspection No. 553

This is to certify that in accordance with chapter 386, Section 7, of Session laws of 1907, the nursery stock now growing for sale by Wellington Nurseries, Worden & Co., Props., of Wellington, Kansas, has been inspected by a duly authorized inspector, and found free from dangerously injurious insects or plant disease.

S. J. HUNTER, State Entomologist.

We furnish the above certificate of health with every shipment.

BENTON REVIEW SHOP, Fowler, Ind.



WINESAP APPLES

APPLES

FOR THE GARDEN AND COMMERCIAL ORCHARDS

Now and then you will hear some pessimist say that "Too many Apple trees are being planted; never can sell or use the crop."

Don't you believe it! Ask a wide-awake fruit dealer his opinion; look at the prices paid for Apples during the last year; see how greedy the buyers are to get more.

The pessimist sees only the wormy fruit, that lies in the orchard, so don't trust him. There can be no over-production of good fruit, nor will it be sold at a loss. If you have one acre, or a hundred, plant Apple trees.

PRUNING ONE-YEAR APPLE TREES AFTER PLANTING—Leave on all the limbs until spring, and when growth starts, if the tree is a whip, simply cut it off at the height which you desire the head to be. We would prefer this to be not more than 18 inches from the ground. If the tree is more or less branched and the head already formed, prune the side branches with regard to the frame of the future head, leaving sticks 4 to 6 inches in length and cut off the top. We do not advise pruning the branches until spring for best success.

PRUNING TWO-YEAR APPLE TREES AFTER PLANTING—With two-year Apple trees, especially of first grade, the shape of the trees usually has been fixed by the nurseryman, but it is necessary in planting to remove all bruised roots with smooth, slicing cut. No trimming of the tops should be done in the fall, but in the early spring you can round up the branches as they ought to be to develop into a well balanced head. Our plan is to prune off the side branches within from 4 to 6 inches of the trunk. Leave from three to five well-distributed branches, which will be the beginning of a well balanced head.

PRICES OF WORDEN'S APPLE TREES

Parcel Post—See inside front cover for rates.	Each	10	100
X, 2 to 3 feet-----	\$0.30	\$2.75	\$25.00
XX, 3 to 4 feet-----	.40	3.75	35.00
XXX, 4 to 6 feet-----	.50	4.75	45.00

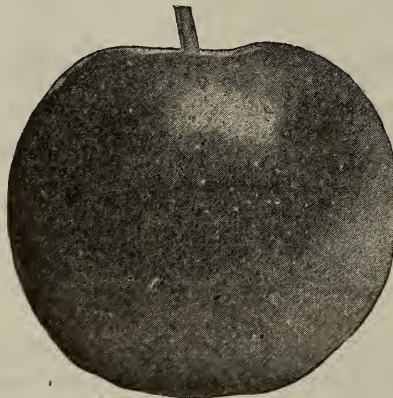
EARLY SUMMER APPLES

EARLY HARVEST—Medium to large, bright straw color; flesh white. Tree is moderately vigorous and productive. One of the very best early apples for the southwest.

CAROLINA RED JUNE (Red June)—Medium size; red; flesh white. Last of June.

DUCHESS OF OLDENBURG (Russian)—Medium to large size; skin yellow, streaked with red, somewhat blushed. Productive, good cooker. August.

COOPER'S EARLY WHITE—Fruit good size, light yellow, flesh white, sub-acid; fine for home use and market. A splendid apple for Kansas and Oklahoma. July to August.



EARLY HARVEST

RED ASTRACHAN—Large, crimson, handsome; rather acid, but good and crisp; profitable. Early.

YELLOW TRANSPARENT—This valuable apple is said to be of Russian origin. However, we find it to be a very valuable addition to our list. Fruit is medium to large; nearly white.

LATE SUMMER AND FALL VARIETIES

MAIDEN BLUSH—Rather large, evenly shaded, red cheek or blush on a clear pale yellow ground; bears large crops. August and September.

CRIMES' GOLDEN — Medium to large; rich golden yellow; flesh tender, mild, sub-acid. Should be gathered before turning yellow, and put in a cool place, and it often keeps until February. For canning purposes it nearly equals the pear. Tree hardy, vigorous, an early and abundant bearer. October to January.

RAMBO—Medium; streaked with dull red and somewhat dotted, productive and vigorous. Season, September to November.

WEALTHY—One of the most desirable varieties. It is gaining in popularity. Productive and vigorous. Dark red. Keeps well in cold storage.

WINTER APPLES

ARKANSAS BLACK—The tree is a beautiful, upright grower, young wood very dark. Fruit medium to large; fine flavor; beautiful dark color, almost black; flesh yellowish, slightly sub-acid, crisp. One of the best cooking apples; vigorous. January to May.

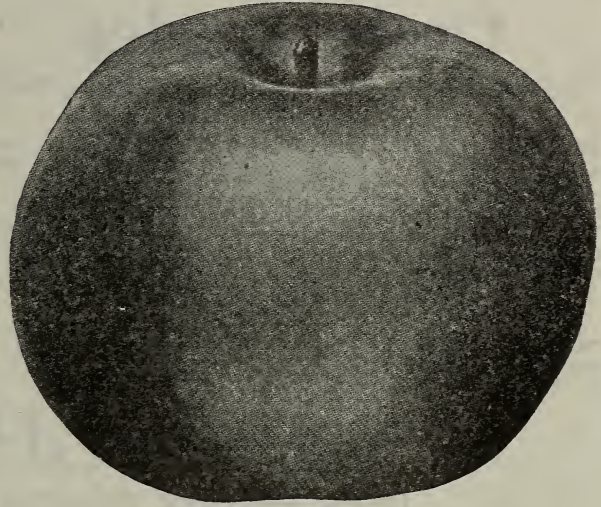
BEN DAVIS—Old variety, large red stripes, good keeper, quality medium.

BLACK BEN DAVIS—Ben Davis type. Fine dark red color.

DELICIOUS—A remarkably popular variety. Fruit large, nearly covered with dull dark red; fine grained, crisp, juicy; quality best; a splendid keeper and shipper; vigorous grower. It is by far the best of the newer apples, and is very profitable.

HUNTSMAN'S FAVORITE — Very large; large; golden yellow with bright red cheek; nearly sweet, fine flavor, very aromatic. Tree very healthy. November to January.

GANO—A good apple, recommended especially for home use. Size medium to large; skin red; flesh white. A good flavored fruit. Keeps well.



MAMMOTH BLACK TWIG

JANET (Rawle's Janet)—Medium, roundish, greenish-yellow, striped with red; rich and juicy; one of the best and longest keepers in the South and Southwest; valuable for its high quality and its late blooming; moderate grower. January to March.

JONATHAN—Fruit medium, roundish; skin yellow, nearly covered with dark or lively red; moderate grower. One of the best apples for home use or market, as it is a delicious dessert apple that always commands the highest market prices. October to January.

MAMMOTH BLACK TWIG — Supposed to be a seedling of the Winesap, but tree is a better grower in the nursery, and fruit is much larger; or in other words, an improved Winesap. Tree a fine, upright, spreading grower.

MISSOURI PIPPIN—Large, oblong, bright red with numerous gray dots; very handsome, and very profitable. December to March.

ROME BEAUTY — Large, yellow-shaded with red; tender, juicy, sub-acid. October to February.

STAYMAN WINESAP — Not quite so well colored as Winesap, but larger; a good keeper; valuable for market or home use. A vigorous grower and adapts itself readily to different soils and conditions.

WINESAP— The Winesap succeeds over a larger territory and variety of soils than any other apple. The Winesap is of medium size, oblong smooth, fine, dark red

skin; the flesh is tinted yellow, tender, crisp, and juicy, very productive, and on account of its even size and high color it sells readily in any market.



STAYMAN WINESAP

YORK IMPERIAL—This apple has been gaining favor, and is being planted largely as a commercial sort. Large, smooth yellow, shaded red, with indistinct red stripes.

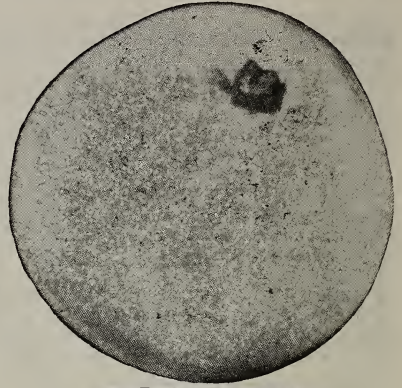
Crab Apples

Prices on Crab Apples Are the Same as for Other Apples

HYSLOP—Almost as large as Red June Apple; deep crimson, very popular on account of its large size, beauty and hardness. Keeps well into the winter.

TRANSCENDENT—Remarkably vigorous, growing to a good size, and immensely productive. Bears a little the second year from planting, and every year after, and produce good crops by the fourth year. The best of its class for cooking and eating; juicy and crisp. Skin yellow, striped with red. September to October.

WHITNEY—Large, averaging $1\frac{1}{2}$ to 2 inches in diameter; skin smooth, glossy green, splashed with carmine; flesh firm, juicy and rich; very hardy, vigorous and handsome.

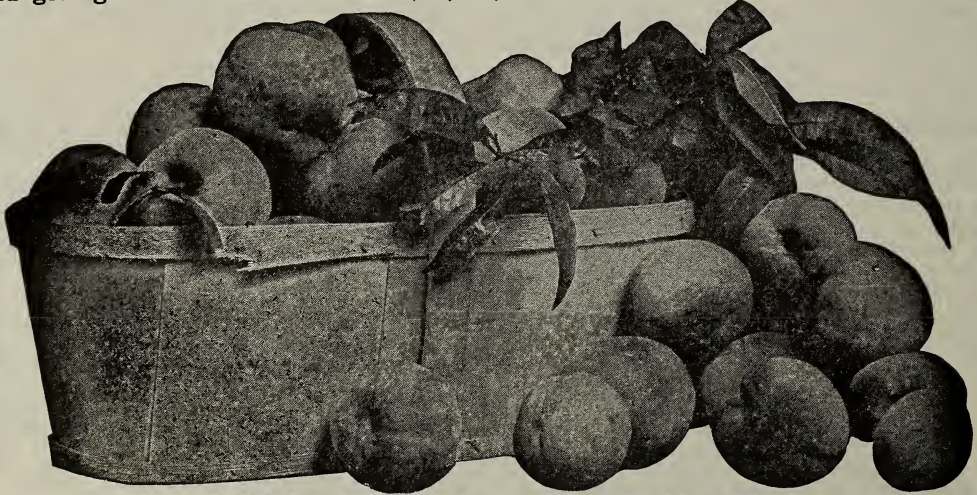


WHITNEY CRAB

PEACHES

GIVE PROFIT YEAR AFTER YEAR

It has been estimated that Peaches have a greater commercial value in the United States than all other stone-fruits combined, as recent reports covering several seasons and giving a value of more than \$30,000,000 for the average annual crop, shows.



BASKET OF JAPAN BLOOD DWARF PEACHES

Transportation problems have been solved, and it is a comparatively easy matter to ship the fruit to distant markets, thus taking advantage of the demand, and securing the highest possible prices. A Peach orchard may live and produce profitable crops for twenty-five years or even longer, but the wise grower plans to secure the cost of the trees and the expense of planting from the first five or six crops, in addition to securing a fair profit and adequate returns for the labor, fertilizer, and other expenses incurred annually.

Expert Peach growers usually select a tract of land sloping to the north, but this is not necessary as the trees will be successful with any other exposure. The ideal soil for Peaches is a light sandy loam, but they will succeed on a great variety of soils, provided they are well drained.

Peaches must be cultivated. All that has been said about planting trees in general and about planting apple trees in particular applies to Peach tree planting. The soil must receive treatment which will give the trees sufficient moisture, available plant food, and fine soil in which the roots may feed.

The new wood grown this year is the productive wood next year, that is: Peaches bear fruit only on wood a year old. It is necessary, therefore, to keep the trees in a thrifty growing condition. Peaches will not produce profitable crops unless the cultivation is thorough.

Peach borers are pests with which the orchardist sometimes has to contend. They are soft yellowish worms with a reddish-brown head; they usually do not bore so deep into the wood as the apple borers, but live just under the bark. They can be kept in control by examining the trees twice a year, during April and October, and giving particular attention to trees that are under eight years of age. You can locate the borers by the dust on the surface of the soil, by a blackened spot on the bark, or by the gum that comes from the hole. Remove the earth from about the base of the tree, then cut around the worm hole with a sharp knife, and if you do not find the worm under the bark, run a wire up or down the hole which will at once destroy the borer. The various remedies for leaf insects and fungui diseases which sometimes afflict the Peach are covered in the spraying tables shown on page 32.

Packing the Fruit—Packing baskets and containers of many different styles are used for shipping Peaches. To a great extent, the local markets will determine the practical container, but as a general rule, the grower will find it best to adopt one of the three standard methods. We believe that the regular six-basket Georgia carrier is the most practical way of packing and shipping the fruit. In this package the fruit ships well, arrives in good order, and is so attractive that it sells for good prices even in a low market. Another advantage is that the carriers can be packed in a standard refrigerator car without loss of space. In some sections of the country the bushel basket is used, but even for this purpose we believe that the half-bushel basket is better for local use, particularly is this true when the fruit is unusually large or too small to pack in a Georgia Carrier.

PRICES OF WORDEN'S PEACH TREES

	Each	10	100
X, 2 to 3 feet-----	\$0.30	\$2.75	\$25.00
XX, 3 to 4 feet-----	.40	3.75	35.00
XXX, 4 to 6 feet-----	.50	4.75	45.00

Parcel Post—See inside front cover for rates.

GENERAL LIST OF VARIETIES

ALEXANDER—Large size, handsome and regular in form, with deep maroon shade; adheres to stone; should remain on the tree until fully ripe. White flesh. Last of June. One of the very best early peaches.

CARMAN—Ripens third week in July. This is a favorite variety with many growers, as it is one of the most profitable in its season of ripening ever introduced. The returns from a successful Carman orchard are almost beyond belief, and the fruit stands shipping so well that it always reaches market in prime condition. The fruit is remarkably attractive and luscious; large and broad, oval-shaped, yellowish-white, flesh is creamy white, red with tinge, spicy and good; free. This is a valuable early peach.

CHAMPION—Ripens August 1st. Fruit large, creamy white, with red cheek, sweet, juicy, very high quality. Good shipper. Free. One of the showiest peaches in our sample orchard, and one that sells for a good price. The tree is hardy and productive, and it is a valuable peach for either the home or the commercial orchard.

EARLY CHAMPION — Resembles Champion in every way, but ripens about a week earlier. An excellent peach to lengthen the Champion season with.

CHINESE CLING—The most popular Southern peach; shape is oblong, has creamy skin with faint flashes of red. Does well in Kansas and Oklahoma. August.

CRAWFORD EARLY — This beautiful yellow peach is highly



BASKET OF CHAMPION PEACHES

esteemed for market purposes. Fruit very large, oblong, skin yellow, with fine red cheek; flesh yellow, juicy, sweet and excellent; free. Last of July.

CRAWFORD LATE—Fruit of the largest size; skin yellow; productive; one of the best freestones. August and September.

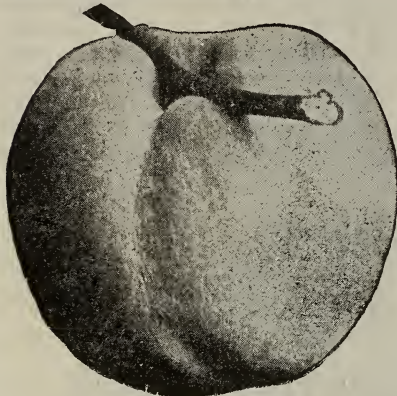
CROSBY—If you want peaches every year, try some Crosby. It is of medium size, rich orange yellow, splashed with red, and of the best quality. Mid-season.

ELBERTA—Ripens middle of August. The reliable peach, of which more are planted and from which more money has been made than from any other variety. The fruit is red; firm, juicy, rich, sweet. Tree vigorous, sturdy, hardy; thrives in widely differing localities. The Elberta is the one variety that every fruitstand customer seems to know. No other peach has ever been introduced which fills all the requirements of a commercial peach with such success as Elberta, in size, appearance, and quality.

GREENSBORO—Large, oblong, greenish-yellow shaded red, flesh creamy; among the best; tree vigorous, prolific; grown largely in Georgia and the South for Northern



CRAWFORD LATE



HEATH CLING

markets. Ripe June first to tenth.

HENRIETTA (Levy)—Magnificent yellow cling, large size, slightly covered with bright crimson, hardy, productive, always commands fancy prices. September 25th.

HEATH CLING—Large, oblong, creamy, slightly tinged with red in the sun; very tender, juicy, melting; very rich and luscious. September 15th.

MOUNTAIN ROSE—Large, red; flesh white, rich, juicy, excellent. Season, August 1st to 10th.

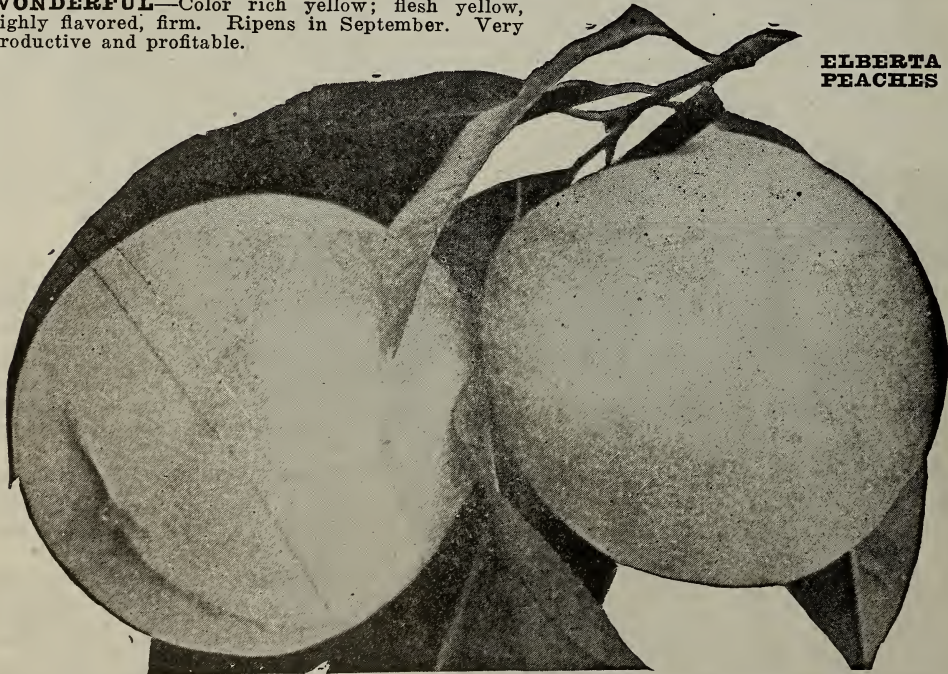
MAYFLOWER—A beautiful "red-all-over" peach; handsome and of splendid quality. Extremely early. Tree hardy and healthy.

SALWAY—Fruit large, yellow with red cheek; flesh yellow, a late showy market sort. Freestone. September 15th. Hardy.

STUMP THE WORLD—Very large; roundish; skin white, with a bright red cheek; flesh white; freestone. End of August.

TRIUMPH—The earliest yellow peach known; productive, hardy and profitable for market. Originated in Georgia. Hardy.

WONDERFUL—Color rich yellow; flesh yellow, highly flavored, firm. Ripens in September. Very productive and profitable.



**ELBERTA
PEACHES**

THE BEST KNOWN MARKET VARIETY

JAPAN BLOOD DWARF (Tomato Peach)—Truly a wonder for early bearing. Resembles Arkansas Traveler in shape; beautiful red color; flesh white with red juice which causes the flesh when ripening to be streaked with red; thus, when peaches are fully ripe, flesh is deep red to the stone; stone small, flavor of peach rich, making it a very desirable fruit for table use, and also a fine variety for canning.

The best and only general purpose early Peach grown. Ripens a week to ten days after the earliest peaches or the last of June. This wonderful Peach has proved to be one of the most

valuable fruits for planters ever introduced. Trees always bear the second year, making them the youngest bearing fruit that can be planted. Records from everywhere show that three bushels to the tree is an average yield for this variety when trees are only three and four years old.

PRICES OF JAPAN DWARF

	Each	10	100
X, Budded, 18 to 24 in.	\$.30	\$2.75	\$25.00
XX, Budded, 2 to 3 feet--	.40	3.75	35.00
XXX, Budded, 3 to 5 feet--	.50	4.75	45.00

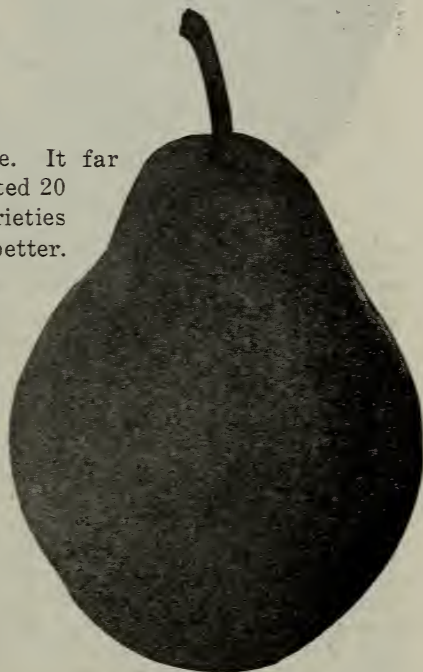
Parcel Post—See inside front cover for rates.

PEARS

THE QUALITY FRUIT

This is one of the very best fruits we have. It far exceeds the apple in flavor. They should be planted 20 feet apart. It is advisable to plant several varieties in the same orchard as the trees will bear better. Tendency of the pear root is to grow straight down, therefore the hole should be dug deep. Spraying with Bordeaux Mixture prevents pear blight. Cut back the long shoots every year about half and you will have no trouble in raising plenty of pears here in the West. Our pears do well in a variety of soils, on clay loam, sandy, gravelly and rich soil. The soil, however, must not be wet. The trees will thrive where apple or peach would starve, and will produce good fruit without much care or cultivation, yet it will repay any attention to care. Pears are always marketable at a good price.

Our Pears are especially clean, smooth, and well rooted, grown on XX French imported stocks.



BARTLETT

PRICES OF PEAR TREES

	Each	10	100
X, Budded, 2 to 4 feet-----	\$.40	\$3.75	\$35.00
XX, Budded, 3 to 5 feet-----	.60	5.50	50.00
XXX, Budded, 4 to 6 feet-----	.75	7.00	65.00

Parcel Post—See inside front cover for rates.

SUMMER PEAR VARIETIES

BARTLETT—Large, skin very thin, clear lemon-yellow, soft blush on sunny side; flesh white, buttery, very juicy and highly flavored. The best summer pear in existence. The Bartlett is so well known that a lengthy description is not necessary. Good shipper and market pear.

CLAPP'S FAVORITE — Large, pale lemon-yellow, crimson on the sunny side and thickly sprinkled with brown dots; flesh is finely grained and melting, rich, vinous flavor. August.

ANJOU—One of the most delicious late summer pears, juicy, excellent quality.



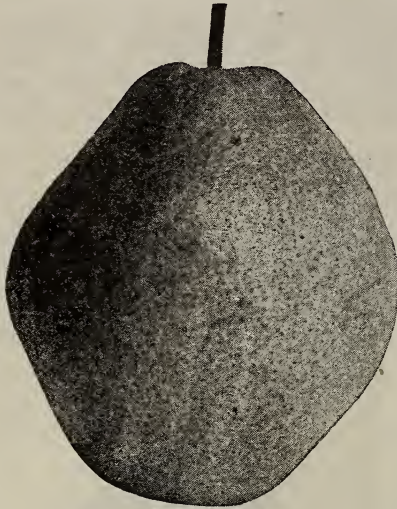
CLAPP'S FAVORITE

AUTUMN PEAR VARIETIES

DUCHESS D'ANGOULEME—Very large, greenish-yellow; sometimes a little russeted; makes a beautiful tree. One of the very best. October and November.

GARBER—Fall. A good pollenizer for Keiffer. Fruit resembles Keiffer, but ripens two to three weeks earlier.

KEIFFER—Fall. Keiffer has proved such a boon to everyone who has planted it that we want its merits fully known by those who are contemplating pears either in a commercial way or in the home orchard. Keiffer can be placed on the market in perfect condition, and the top prices of the market can always be secured for it. It is unfortunate that the merits of this pear have become underestimated because of the haste in which it has been hurried to market in immature condition by some growers, and often before it has attained its proper size. When allowed to hang upon the trees until in October, and then carefully ripened in a cool dark room, there are few pears which are more attractive. The fruit is large to very large; skin yellow, with a light vermillion cheek; flesh brittle, very juicy with a marked musky aroma; good quality; combines extreme juiciness with a sprightly sub-acid flavor, and the peculiar aroma of the Bartlett. Large fruit growers are planting whole orchards of it—90 per cent Keiffer and 10 per cent Garber or other good varieties



KEIFFER

should be arranged in every good orchard to secure the pollenation necessary for producing large crops from Keiffer.

SECKEL—Fall. Very juicy; highly flavored; trees small and stocky. An excellent fruit for home or market.

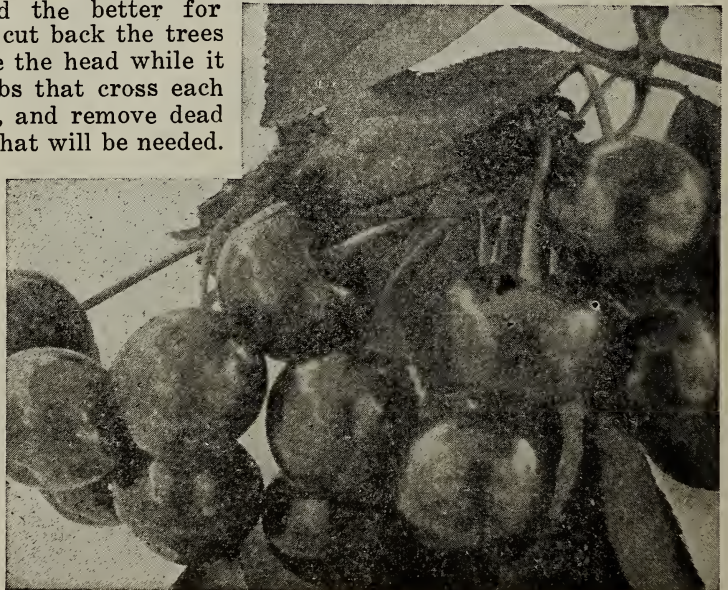
FLEMISH BEAUTY—Large, beautiful, juicy, melting, rich and fine; strong grower and good bearer; hardy everywhere. September and October.

CHERRIES

THE READY MONEY CROP

The Cherry is probably the most profitable of all the tree fruits to the fruit grower. This popular fruit always commands a good price, bears regularly, being very hardy in bud; is long lived and always in demand either for market or home consumption. We recommend for home use or market purposes in the following proportions: 40 per cent Early Richmond, 40 per cent Montmorency, 20 per cent English Morello and Wragg. This applies to the Middle West only. In these states the Sweet Cherry is not a success. The less Cherry trees are pruned the better for them. It is necessary to cut back the trees at the start, and to shape the head while it is growing. Cut out limbs that cross each other, let in the sunlight, and remove dead limbs. That is about all that will be needed.

Fruit is borne only on wood that is two or three years old. As for marketing, only a few words are to be said, yet there are of great importance. Remove all imperfect cherries, then carefully pack the perfect ones. On almost any city market you can get splendid prices for good Cherries properly packed and in first-class condition.



EARLY RICHMOND

PRICES OF CHERRY TREES

	Each	10	100
X, 2 to 3 feet-----	\$0.40	\$3.75	\$35.00
XX, 3 to 4 feet-----	.60	5.50	50.00
XXX, 4 to 6 feet-----	.75	7.00	65.00

Parcel Post—See inside front cover for rates.

EARLY RICHMOND — Red. May.

Fruit light red, medium size, very sour. tree thrifty, healthy and prolific; at home everywhere. For canning Richmond is easily the best of all cherries. Every landowner should have a few Early Richmond trees in his orchard.

MONTMORENCY — Red.

June. One of the largest of the sour cherries, the fruit being bright red with solid, juicy flesh, very rich and acid. The tree is hardy, healthy and extremely prolific, bearing abundant crops even in unfavorable seasons. It is less susceptible to disease than other sour sorts.

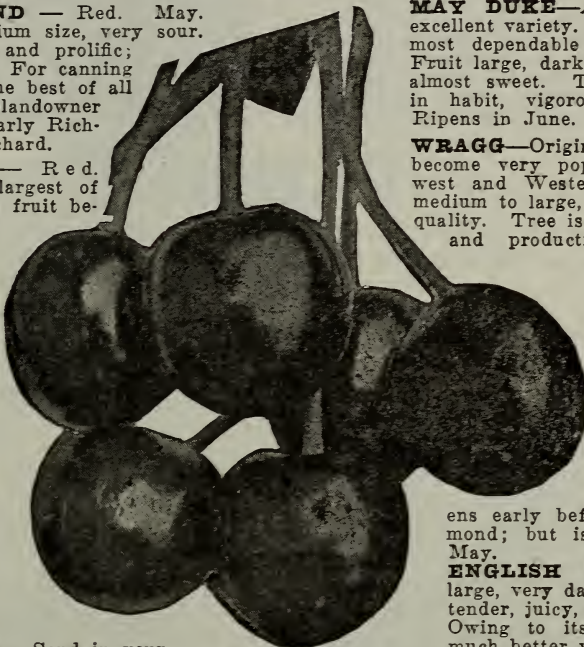
COMPASS CHERRY PLUM

—The almost phenomenal sale of the Compass Cherry Plum last spring shows again how well this fruit is liked wherever known. We did not have enough trees. Send in your order early and you will be sure to get them. Please compare our prices with those of the tree agents. We

have made prices very reasonable and besides, you will be sure to get the true Compass. Absolutely hardy everywhere. The Cherry was originated at Springfield, Minn. It is a cross between the Sand Cherry and the Miner Plum. Fruit nearly an inch in diameter, a bright red, sweet and juicy and of a very fine flavor. When young and green the fruits have more the appearance of undeveloped plums, but as they mature they become round, like a cherry. The pit is somewhat elongated. In color the fruit is a bright red, when fully ripe, a dark wine shade. For canning and cooking this fruit is unsurpassed. The original tree bears fruit the third year from the seed, and has borne a full crop every year since. The tree is a regular heavy bearer and produces fruit the next year after setting out. Its early bearing truly is wonderful. This tree should be planted everywhere. It will do well from Texas to North Dakota. Especially would I advise my customers in Western Kansas and Eastern Colorado to plant them largely. They will bear good crops of valuable fruit when all other trees fail.

	Each	10	100
X, 2 to 3 feet-----	\$0.40	\$4.00	\$35.00
X, 3 to 4 feet-----	.60	5.75	55.00
XXX, 4 to 6 feet-----	.75	7.00	65.00

Parcel Post—See inside front cover for rates.

**MONTMORENCY**

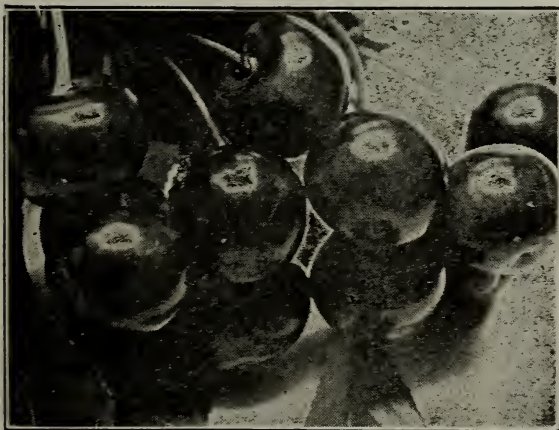
MAY DUKE—An old, well-known, excellent variety. One of the best and most dependable of the Duke class. Fruit large, dark red, juicy and rich; almost sweet. Tree is rather dwarf in habit, vigorous and productive. Ripens in June.

WRAGG—Originated in Iowa; has become very popular in the Northwest and Western states. Fruit is medium to large, dark red and of fine quality. Tree is very hardy, vigorous and productiveness, and is of dwarfish growth with a spreading round head; not subject to disease. This is one of the few cherries of good commercial quality that is perfectly hardy. Ripens in July.

DYEHOUSE—

Very early and sure bearer; ripens early before the Early Richmond; but is not as productive. May.

ENGLISH MORELLO—Fruit large, very dark red, nearly black; tender, juicy, acid, of good quality. Owing to its red color it looks much better when canned than the Early Richmond. Tree dwarf, slender. Ripens in July.

**COMPASS CHERRY PLUM****ROCKY MOUNTAIN CHERRY**—A

native cherry of dwarfish habit, perfectly hardy everywhere in the Northwest and stands the coldest winters without protection. Fruit about as large as Early Richmond, color dark brown to black, somewhat astringent to eat from the hand, but cooks well and makes fine preserves and jellies. Very early and an abundant bearer. Can be planted about as close as currants. Very desirable in the Northwest where better cherries cannot be grown. Ripens early in July, after other cherries are gone. Bush (it is not really a tree) is very ornamental and deserves a place in every yard.

PRICE OF ROCKY MOUNTAIN CHERRY

One and one-half feet to 2½ feet, nice bushy little trees, 30c each; \$2.60 for 10.

Don't neglect to plant those Cherry trees this year and reap the benefit of your own crop.

QUINCES

Prices of Quince trees, 3 to 4 feet, 75c each, \$6.50 for 10.

CHAMPION—Very large, greenish-yellow; flesh cooks a tender as an apple and without hard spots or cores; flavor delicate, imparting an exquisite quince taste and odor to any fruit with which it is cooked. Trees are vigorous growers and bear heavy crops of superior fruit;

one of the best for sections not subject to early frosts. October.

ORANGE—Large, bright golden yellow; fine, firm flesh and good flavor; one of the best for cooking. The most popular and extensively cultivated of the old varieties. October.

PLUMS

Plums should be planted about 10 feet apart, and varieties should be mixed. Better plant four or five varieties than only one, as they will bear much better than when one variety is planted alone. The Plum prefers a rich and rather sandy clay loam soil and like all fruit trees, it will not thrive in cold, wet soil. To one who is willing to give his orchard a reasonable amount of attention and cultivation, plum growing will be highly profitable.



BURBANK PLUMS

PRICES OF PLUMS

	Each	10	100
X, 2 to 3 feet-----	\$0.40	\$3.75	\$35.00
XX, 3 to 4 feet-----	.60	5.50	50.00
XXX, 4 to 6 feet-----	.75	7.00	65.00

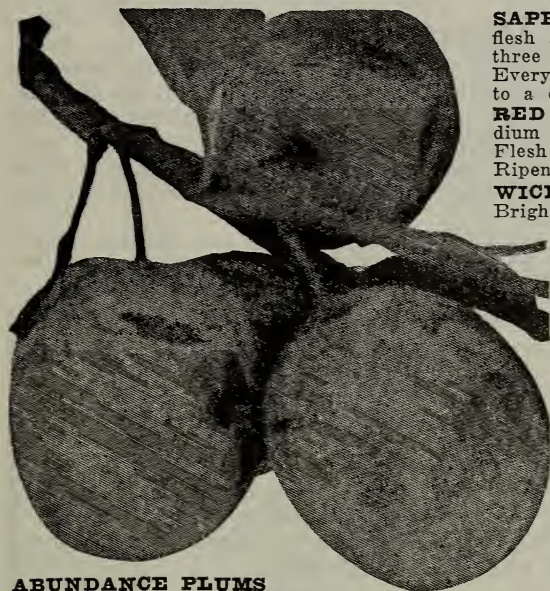
Parcel Post—See inside front cover for rates.

WILD GOOSE—The first native plum to be generally planted. Fruit of medium size, bright clear red with blue bloom; of sweet flavor, and very juicy. Ripens medium early. Trees healthy and spreading, blooms in large snowy banks

and is very ornamental. On account of earliness, productiveness and good shipping qualities it is a popular sort. Season July.

BLUE DAMSON—Medium size, dark purple, flesh amber colored and rich. Very fine for canning. Hardy. Middle of September.

PURPLE PRUNE—A valuable plum of fair quality for desserts, but most esteemed for drying and preserving. Large, long-oval, purple, with a thick blue bloom; flesh firm, sweet and pleasant, separating from the stone. Moderate to vigorous in growth. September.



ABUNDANCE PLUMS

SAPPA—Much like the Oxheart Cherry, dark flesh and juicy. Fine quality. Five-foot trees at three years bear 1 to 1½ bushels and keep it up. Every home in the country should possess from one to a dozen of these wonderful trees.

RED JUNE—The great early market variety, medium to large, deep red, with beautiful bloom. Flesh lemon yellow, firm and of delightful quality. Ripens early. August. A prize winner.

WICKSON—Very large and superb in every way. Bright cherry red and small pit. Flesh firm, sweet, tender and a good shipper. A good bearer. September.

ABUNDANCE—Medium size, amber with red; juicy and sweet. A good market variety. Ripens in August.

BURBANK—When properly thinned, the fruit of this plum is very large—5 to 6 inches in circumference—nearly round bright cherry red with beautiful bloom. Flesh lemon yellow, firm, and of delightful quality. Ripens early August. A prize winner.

SATSUMA (Blood)—A delicious plum for canning and a grand market sort. Fruit very large with deep red skin and flesh. Keeps two weeks after picking. A good bearer. September.

The Delicious Apricot

A most delicious fruit of the plum species. Is of a distinct flavor and one of our best and most profitable market fruits. The tree bears very young and most profusely. Ripening as it does between the cherries and peaches, the Apricot is a most welcome fruit. In very sunny localities it is apt to bloom too early in the spring and be caught by the frost. The tree is slender in form, has beautiful dark-green foliage, pretty pink blossoms, and gives very satisfactory results as an ornamental tree in any garden or house lot. To avoid being caught by late spring frosts, spread long strawy manure about one foot thick around the tree in the winter

	Each	10	100
X, 2 to 3 feet—	\$0.40	\$3.75	\$35.00
XX, 3 to 5 feet—	.60	5.50	50.00
XXX, 4 to 6 feet—	.75	7.00	65.00

Parcel Post—See inside front cover for rates.

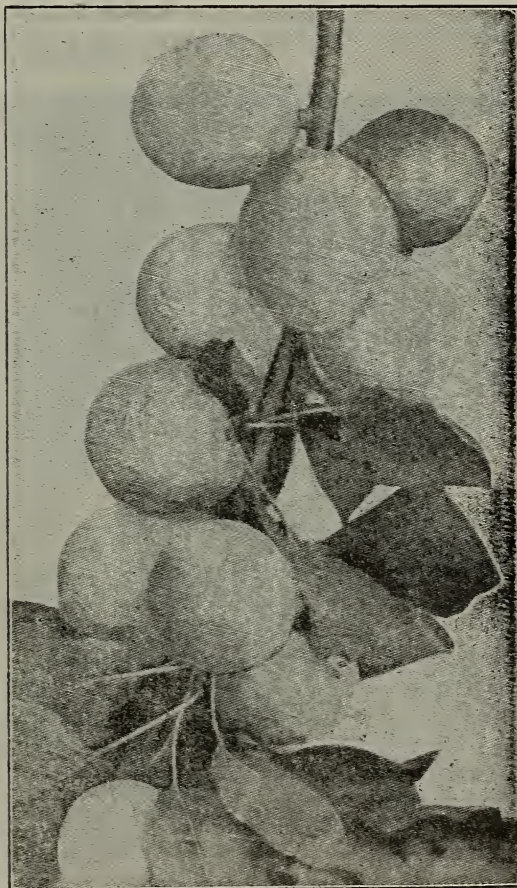
EARLY GOLDEN—Fruit small, pale orange yellow, juicy and sweet. Tree hardy and productive. The best of the small fruited sorts. Ripens about July first.

ROYAL—French origin. Medium size, dull yellow with red cheek. Flesh pale orange with rich vinous flavor. Not hardy in Nebraska. June.

MOORPARK—Very large, yellowish-green with red on sunny side; flesh bright orange on freestone. Fine for canning and drying. Largely planted on Pacific coast. Late June.

BUDD—Large yellow, with red cheek, rich and slightly acid. Tree hardy and very prolific. July 1st to 10th.

SUPERB—A new variety from Kansas. Very hardy, of the Russian type. The best flavored and most productive apricot yet produced. Medium size.



MOORPARK

NECTARINES

The Nectarine is almost identical with the Peach. Most botanists consider them the same species, the difference between the two lying in the skin, the Nectarine having a smooth and the peach a downy surface. The fruit, however, is rather smaller and scarcely so rich in flavor as the best peaches, but they have a very sprightly and delicious quality, and their exquisite waxlike appearance makes them highly popular as a dessert fruit. The Nectarine requires the same culture and management as the peach.

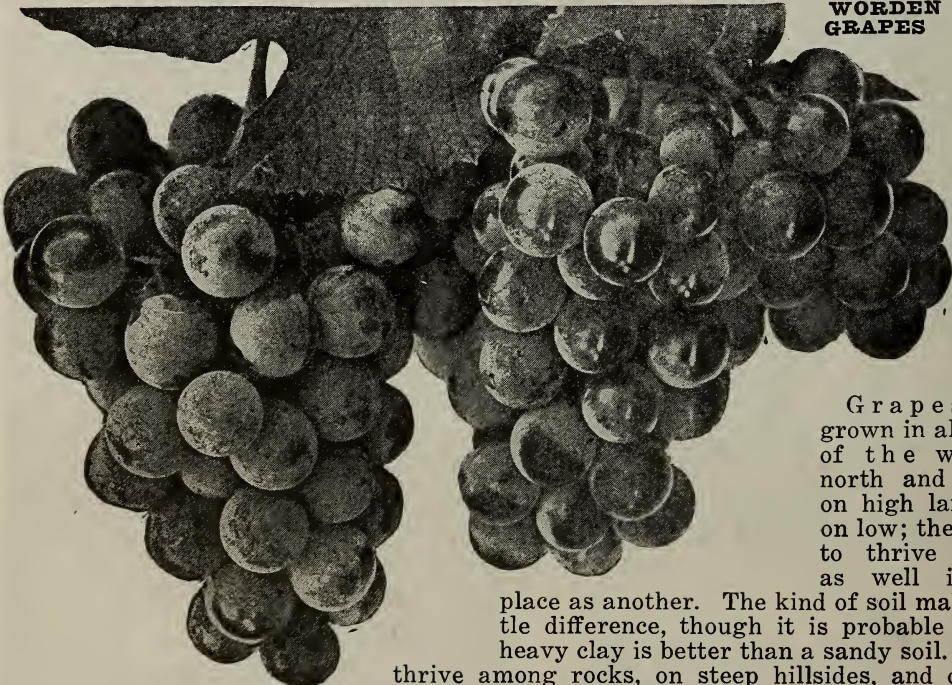
BOSTON—Fruit large and handsome, deep yellow, with a bright blush and mottling of red; flesh yellow to the stone, very sweet, with a pleasant and peculiar flavor. Freestone, hardy and productive. Prices of Nectarines, 3 to 5 feet, 60c each, 10 for \$5.00.

SMALL FRUITS FOR HOME GARDENS

Small fruits should be in your home garden, no matter if you do have an orchard of apple, peach, or plum trees. Think of the wonderful flavor of grapes, the delightful zest of Currants and Gooseberries, and a luscious pie of Blackberries, Dewberries or Raspberries.

Grapes can be grown in any garden and trained along the fence. Raspberries and other bush fruits can be grown in out-of-the-way places. If you plant this fall or early next spring, you will be helping to increase our country's future food supply. There is no waste in small fruits.

GRAPES FIVE SELECTED SORTS



**WORDEN
GRAPES**

Grapes are grown in all parts of the world, north and south, on high land and on low; they seem to thrive nearly as well in one place as another. The kind of soil makes little difference, though it is probable that a heavy clay is better than a sandy soil. Vines thrive among rocks, on steep hillsides, and on rich bottom lands. Drainage is essential, as with all fruits, and in low pockets of land frost is likely to catch blossoms.

The newly planted vines should be mulched heavily with straw and manure, for two feet about the vine. They require lots of nitrogen, which the mulch will supply while it is saving moisture. Add whatever commercial fertilizer the vines may lack. For the first season the vines may be tied to stakes or allowed to run

on the ground. After that they should be trained on trellises to make easy the spraying, cultivation, and picking. For home trellises use the form you like or can get best.

PRICES OF GRAPES

Concord Black	--\$0.25	\$2.50	\$15.00
Moore's Early	-- .35	3.50	25.00
Catawba, Red	-- .35	3.50	25.00
Niagara, White	-- .35	3.50	25.00
Worden, Black	-- .35	3.50	25.00

The five best varieties of Grapes.

Parcel Post—See inside front cover for rates.

CONCORD (Black)—Ripens the beginning of August. From sheer merit Concord has become the most popular Grape in the United States. Taking the country as a whole, more Concord is now in bearing than any other variety. No other Grape succeeds over a wider area or in so many different soils. New varieties may come, but they have to work hard to reach the Concord standard for market purposes. Matures early, bears well and sells well. Bunches big, berries juicy, sweet and delicious. Concord overcomes local Grape troubles and is safe to plant.

MOORE'E EARLY (Black)—Ripens a little before Concord. Berries large and fine; very black; bunches medium size, held together firmly; flesh pulpy, better than medium quality; flavor needs no apology anywhere. Stands handling and shipping well, and has an established reputation on all markets. Vines healthy and hardy, thrive in almost any soil or climate where grapes will grow at all. Valuable market variety and for commercial planting leaves very little to be desired. Moore's Early is one of the most profitable grapes to grow, as it makes a fine showing when packed properly, can be put on the market in advance of every other variety, when Grapelovers are willing to pay almost any price for their favorite fruit, and it stands shipping in a way that leaves nothing to be desired.

WORDEN (Black)—Large berries and bunches. A handsome black grape with a beautiful bloom, and in quality the fruit is extra fine, being sweet and juicy.

CATAWBA (Red)—Bunches and berries large, somewhat loosely formed. A general favorite and well known.

NIAGARA (White)—Leading white market variety. Bunch and berry large, greenish white, changing to pale yellow when fully ripe. Quality excellent. August.

Blackberries of Quality

Prices—15c each, \$1.00 for 10, 25 for \$2.00, \$6.00 per 100. Parcel Post—See rates inside front cover.

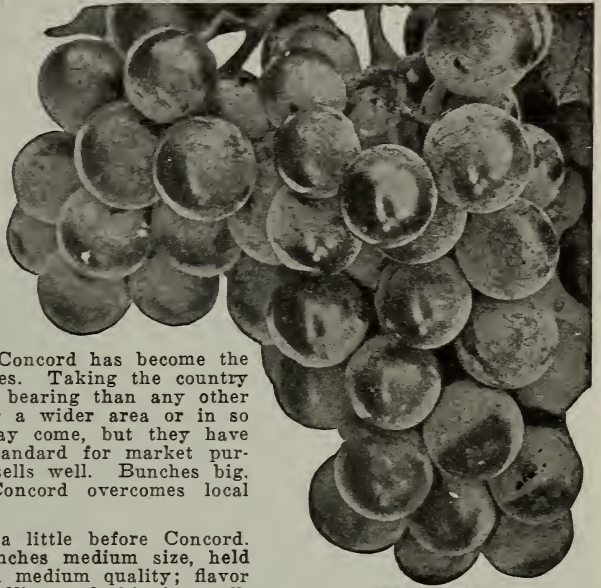
EARLY HARVEST—A valuable sort for the home gardener. Ripens before other sorts. Excellent quality and flavor.

ELDORADO—Jet black berries of enormous size. The vines are strong, vigorous, and rarely fail to produce abundant crops. Flavor excellent.

MESSEREAU—This is without doubt the

blackberry of all the new blackberries. It is very large and long; jet black, luscious, and has all the qualities of an ideal berry. We have never seen any berry that fruited so well. We have no hesitancy in recommending this one to all who intend planting Blackberries.

SNYDER—An old favorite. Very hardy. Excellent quality and flavor.



CONCORD



EARLY HARVEST BLACKBERRIES

DEWBERRIES OR CLIMBING BLACKBERRIES

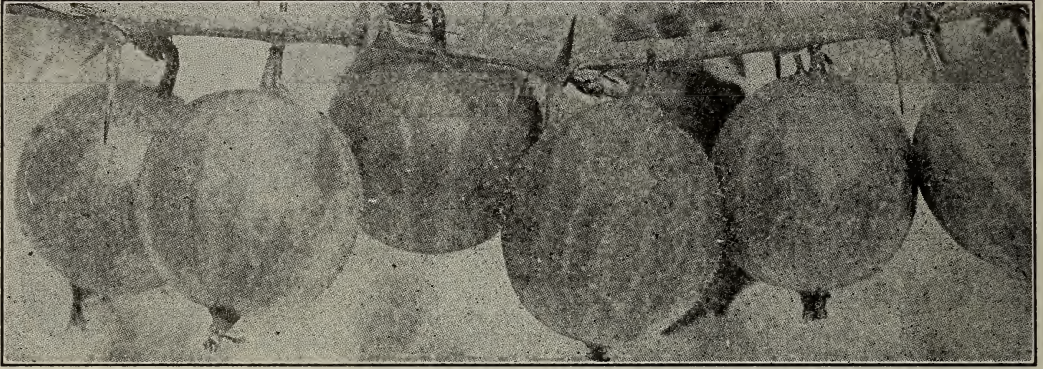
Prices, 15c each, \$1.00 for 10, \$2.00 for 25, \$6.00 per 100. Parcel Post—See inside front cover for rates.

LUCRETIA—The best Dewberry. The berries are large, jet black, and have a pleasing

sub-acid flavor. Plants strong growers and bear enormous crops. Lucretia is a splendid berry for table use and for canning.

AUSTIN—Black; large size berries of excellent flavor and quality. Productive.

Gooseberries



HOUGHTON GOOSEBERRIES

Price, 35c each, \$3.25 for 10, \$30.00 per 100. Parcel Post—See inside front cover for rates.

DOWNING—Old, reliable, large fruiting; splendid quality; handsome and pale green in color; vigorous grower.

HOUGHTON—Nearly always produces full crops, and never fails to produce a crop every year. One of the healthiest and hardiest; berries of medium size. The best and most profitable berry for home use.

Plant More Raspberries

Prices, 15c each, \$1.00 for 10, \$6.00 per 100. Parcel Post—See inside front cover for rates.

CUMBERLAND—Black. Ripens about mid-season; very hardy and productive, handsome appearance, and fruit very large. Healthy and vigorous.

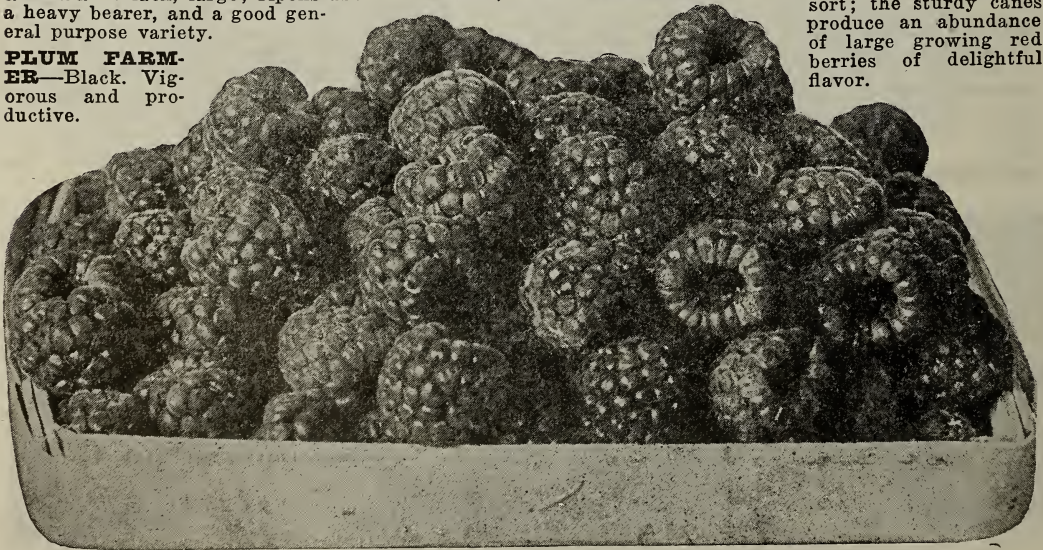
GREGG—Black, large; ripens about midseason; a heavy bearer, and a good general purpose variety.

PLUM FARMER—Black. Vigorous and productive.

KANSAS—Black. Firm, and among the best for all purposes.

CUTHBERT—Red. Large; late. The leading red raspberry everywhere. Of very best quality.

ST. REGIS—Red. Almost an everbearing sort; the sturdy canes produce an abundance of large growing red berries of delightful flavor.



TRAY OF CUMBERLAND RASPBERRIES

Strawberries

THE BEST OF THE SMALL FRUITS

Is there anything more delicious than a nice big piece of Strawberry shortcake? No, nothing—unless it's the whole cake. But to have shortcake, you must first have berries. And to be certain of having berries you should set the plants in your own garden.

A hundred plants will make a patch for a family of four, but there won't be any surplus fruit. Better set five hundred plants, and have fruit for preserving or to sell to your neighbors. If the berries are not disposed of when freshly picked, they may be preserved or canned for winter use. No waste here, you see.



DISH OF DUNLAP STRAWBERRIES

	12	25	50	100	250	500
Aroma (Per) -----	\$0.40	\$0.70	\$1.00	\$1.50	\$2.50	\$ 4.00
Brandywine (Per) -----	.40	.70	1.00	1.50	2.50	4.00
Gandy (Per) -----	.40	.70	1.00	1.50	2.50	4.00
Warfield (Imp) -----	.40	.70	1.00	1.50	2.50	4.00
Senator Dunlap (Per) -----	.40	.70	1.00	1.50	2.50	4.00
August Luther (Per) -----	.40	.70	1.00	1.50	2.50	4.00
Progressive (Per) -----	.80	1.20	2.00	3.50	6.00	10.00

Parcel Post—See inside front cover for rates.

GANDY (Per)—The latest Strawberry we grow. Yields tremendous crops of a quality that leave nothing to be desired in flavor, texture, color, and keeping qualities. Berries bright red, with somewhat smooth surface. Foliage broad and dark green. As a late market sort and long distance shipper, it is the best kind we have grown.

SENATOR DUNLAP (Per)—Early berries, uniform, shapely, dark red, mild and delicious,

very juicy, handsome, sell quickly. Plants make a remarkable growth, are tall, compact; leaves light green; make abundant runners, and an unusual number of crowns. Yields are wonderful.

PROGRESSIVE (Per)—One of the finest berries on the market today. Everbearing; fine color; shapely; delicious. Will bear fruit until late October. A very desirable variety for the home garden from the fact that it bears great quantities of fruit.

ASPARAGUS

The demand for Asparagus increases each year. It should be planted on rich soil and in addition should be manured with well-rotted manure each year. It makes a very heavy growth, and to be able to do well must be well fed. Plant about six inches deep, covering the plants with about three inches of soil when

planted, and filling the rest of the hole as the plant grows. This will enable you to cut the stalk below the ground if you so desire. Cultivate well the first year at least. It will always pay well for the attention it receives.

Prices, 50c per 12; \$2.50 per 100. Parcel Post rates inside front cover.

RHUBARB

Medium plants, 75c per 12; \$7.50 per 100.
Extra large plants, \$1.50 per 12; \$10.00 per 100.

LINNAEUS—This is one of the cheapest vegetables that can be grown. Market gardeners generally pull some the first year, but it is well to give it a full year of cultivation before using any of it. Plant the crowns a little be-

low the surface. Manure heavily and cultivate well. It is easily canned for winter pies, and may be used from early spring to September.

HORSERADISH

Strong plants, 60c per 12; \$4.00 per 100.
Parcel Post rates inside front cover.

Ornamental Department



EFFECTIVE PLANTING AT LITTLE COST

It is almost needless to say that trees and shrubs greatly increase the value of any property; yet you may ride through some of the best farming sections and find that the owners have given little, if any attention, to the home surroundings. Fortunately, the articles in the farm papers from time to time, combined with the efforts of the civic improvement societies, are having a noticeable effect in changing this situation.

The majority of men, whether in the country or in the city, do not need any arguments to convince them that home plantings will improve the looks of their place and add to their home comforts; the only reason that we can see why they have not taken advantage of these things is that they believe it takes too much money, too much skill and care to plan the grounds and plant them in proper order. This is an entirely wrong idea; the expense is comparatively slight, the labor of planting amounts to very little, and almost every home owner can make a reasonably good selection of trees and shrubs that ought to be around his place. Only on the very largest places would the services of a landscape architect be needed.



NOTHING ADDS MORE TO YOUR HOME THAN A FEW WELL CHOSEN PLANTS

Of course one ought to know something about the habits of the trees and shrubs used, and select those that are adapted to the location, to the soil, and to the climate; otherwise the results would not be altogether satisfactory. The foundation walk can be screened with low-growing shrubs like the Barberry, Anthony Waterer Spirea, or with the low-growing evergreens; at the curves in the drives and walks, clumps of evergreens, groups of flowering shrubs, or paeones may be used to advantage.

About the lawn maples, evergreens and shrubs can be used with good effect and a Privet or Barberry hedge is far superior to the most elaborate fence.

The worst "barn of a place" can be changed into an attractive and desirable residence so far as the outside surroundings can make it so, and the merely expensive home can be changed to a really beautiful place. Each tree and shrub has a definite use, and nine times out of ten the average home owner will select and place these trees and shrubs so that he secures at little cost the home appearance that he has so ardently longed for.

Through the whole list of handsome and quick-growing trees and shrubs we have desirable specimens to offer. They have been grown on good soil, under the best conditions, and by men who understand growing deciduous and evergreen trees.

PLANTING HINTS—In preparing the ground for the trees, dig at least two feet deep and three feet wide. Thoroughly mix the soil you take out, and then you can put about a foot of it back.

Start the tree 10 inches deeper than you want them to set. Sprinkle fine dirt in among the roots, and, as you continue to do this, jolt the tree up and down so as to settle the dirt in among the fine roots. As the hole fills up keep packing the dirt. Use a heavy maul and come down on the dirt with all your weight. You cannot get it too tight about the roots. The top inch or two of dirt, however, should be loose to conserve moisture. Trees finally should set just about two inches deeper than they did in the nursery.

After planting, you may water the trees liberally. We strongly recommend that you mulch immediately underneath newly planted trees. Hay, cut straw, and straw-manure are good material to use for this. A layer six inches thick is not too deep. Such a mulch will keep the ground damp all the time, and will prevent nearly all evaporation. Unless you use this mulch it will be necessary to hoe around the tree every week or so to keep a mulch of dust on the surface to conserve the moisture. The after-treatment is determined easily.



THE HOME BECOMES A HOME WHEN THE GROUNDS ARE PROPERLY PLANTED

Deciduous Trees

"IT'S HOT TODAY—WISH WE HAD SOME SHADE TREES"

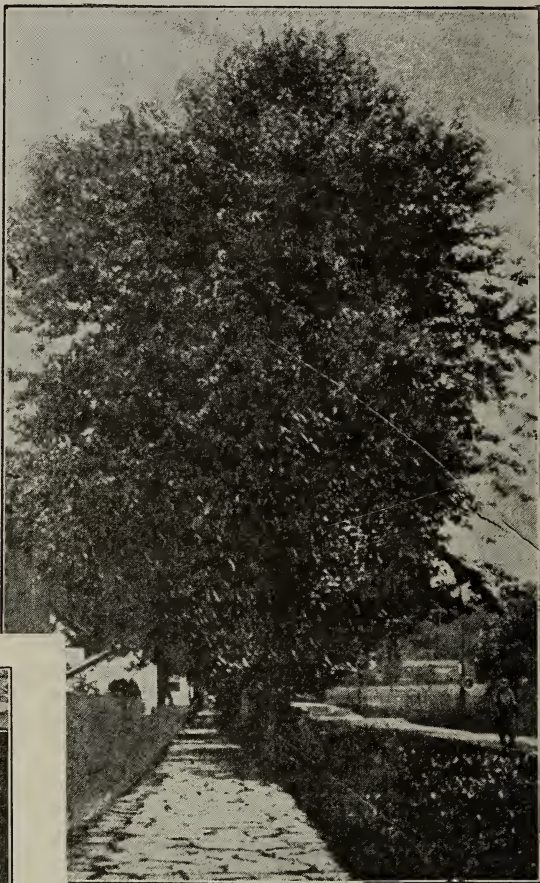
Ever hear any of the folks say that? Dollars to doughnuts you have said it yourself. But still you will go year after year without planting shade trees around the house.

There are several good reasons for planting shade trees; they keep off the intense heat of the summer sun; they afford a cool spot where the children can play; they make the place more pleasing and they greatly increase the value of the home.

Talk it over with friend wife, decide to increase the beauty of your place, plant shade trees now this year, and in a few seasons you will begin to realize that the small cost of the trees was one of the best investments you ever made.

ASH, WHITE (*Fraxinus Americana*)—A rapid growing native tree of fine symmetrical outline. Very hardy and draught resistant. Good street or park tree.

	Each	10
4 to 5 feet-----	\$0.35	\$3.00
5 to 6 feet-----	.60	5.00
6 to 7 feet-----	.75	6.00
7 to 8 feet-----	1.00	8.00
8 to 10 feet-----	1.50	12.50



SILVER MAPLE

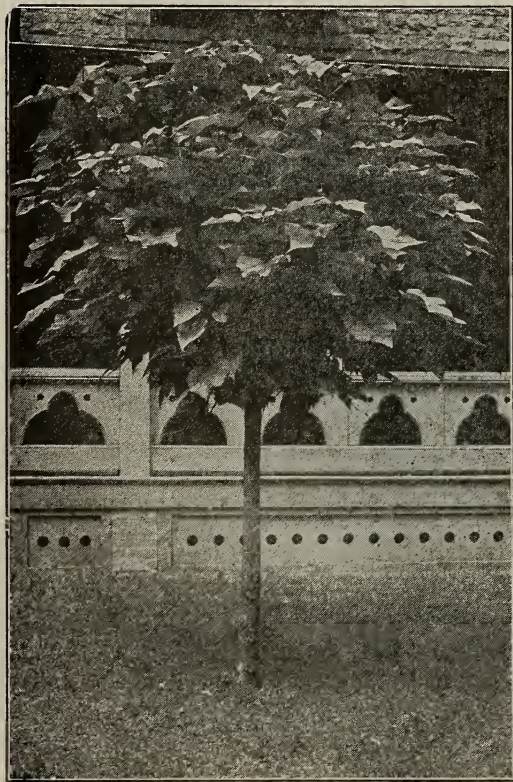
BOX ELDER (Ash Leaved Maple)—A small native tree, Maple-like in its seed, and ash-like in its foliage. Of spreading habit, rapid growth, very hardy, desirable for street planting, and succeeds in many places where other varieties do not thrive.

	Each	10
4 to 5 feet-----	\$0.35	\$3.00
5 to 6 feet-----	.60	5.00
6 to 8 feet-----	.75	6.00

CATALPA BUNGEII (Round Headed Catalpa)—Very hardy and effective; much used in formal gardens; has the outlines of the standard bay trees. 6-foot stems.

	Each	10
2-year crowns -----	\$2.50	\$20.00
1-year crowns -----	1.50	12.50

MAPLE, SILVER (*Acer Dasycarpum*)—The name comes from the color of the leaves. Underneath these are the same shade as new, bright silver; on top they are light green. Many of them are carried on their edges, and when the wind blows the tree is alive with silver and green flashes. In the fall the leaves fade to



CATALPA BUNGEII

pale yellow. A rapid grower, and a good street and ornamental tree.

	Each	10	100
4 to 5 feet-----	\$0.35	\$2.75	\$25.00
5 to 6 feet-----	.40	3.75	35.00
6 to 8 feet-----	.60	5.50	50.00
8 to 10 feet-----	1.00	7.50	65.00

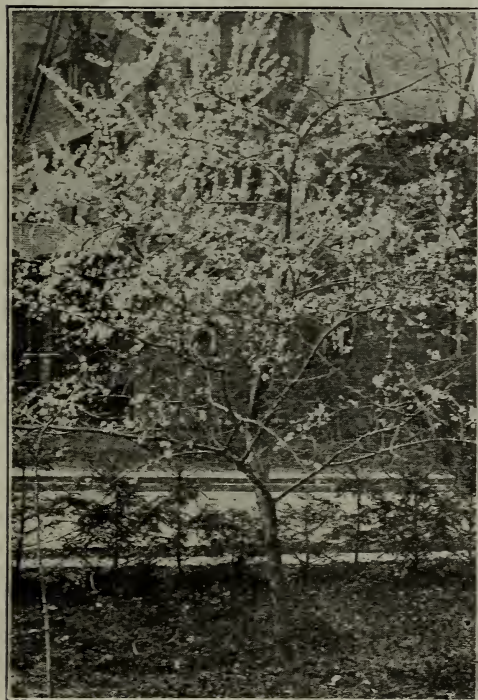
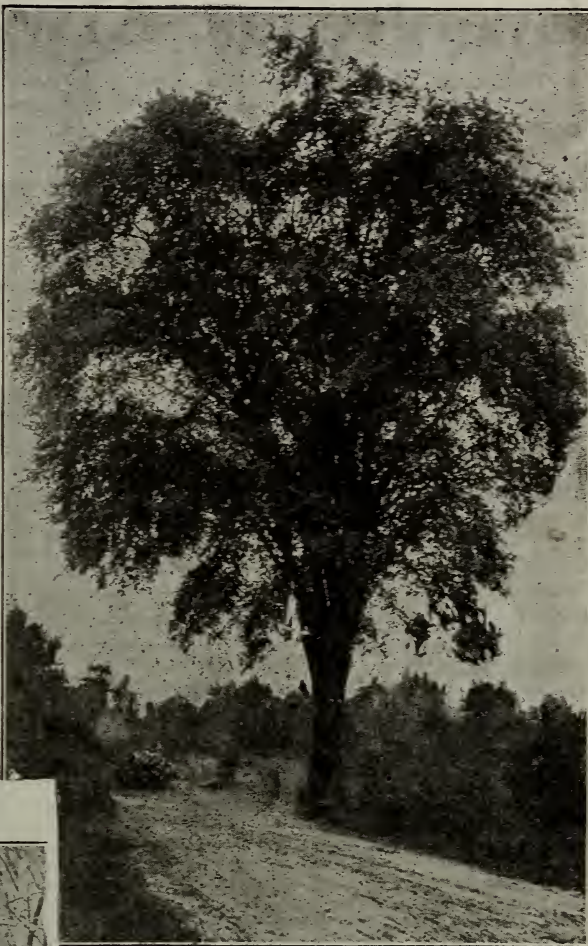
LOCUST, BLACK (*Robinia Pseudacacia*)—A large native tree of rapid growth, valuable for shade as well as quite ornamental. The yellowish-white flowers are in long pendulous racemes and appear in June. Wood is very valuable for posts, growing more quickly to a given size than any other hard wood. The timber is of very best quality and for posts outlasts, with a few exceptions, all other sorts. The Forestry Division of the Agricultural Department, at Washington, recommends the Black Locust for timber plantation for Oklahoma, Texas, New Mexico, Kansas, Nebraska, and California.

	Each	10	100
4 to 5 feet-----	\$0.25	\$2.20	\$20.00
5 to 6 feet-----	.40	3.75	35.00
6 to 8 feet-----	.50	4.75	45.00

SYCAMORE, AMERICAN (*Platanus*)—One of the very best of all trees for street planting. Has a very wide, round-topped head and heavy, thick trunk and branches. The dense foliage makes it a desirable shade etree. It is a rapid grower.

	Each	10	100
5 to 6 feet-----	\$0.50	\$4.50	\$40.00
6 to 8 feet-----	.75	7.00	60.00
8 to 10 feet-----	1.00	9.00	80.00

ELM, AMERICAN (*Ulmus Americana*)—A noble native tree of large size, wide spreading head and graceful drooping branches. Easy to transplant; a hardy grower. One of the best park and street



RED BUD OR JUDAS TREE

AMERICAN ELM

trees, hardy everywhere. We can furnish large White Elm trees, all well pruned, well-rooted and with good tops, by the carload. Write for prices in large quantities.

	Each	10	100
5 to 6 feet-----	\$0.40	\$3.50	\$30.00
6 to 7 feet-----	.60	5.50	50.00
7 to 8 feet-----	.75	7.00	65.00
8 to 10 feet-----	1.00	9.00	80.00
10 to 12 feet-----	1.50	12.50	100.00

POPLAR, CAROLINA (*Populus Caroliniana*).

	Each	10	100
4 to 6 feet-----	\$0.30	\$2.50	\$20.00
6 to 8 feet-----	.40	3.50	35.00
8 to 10 feet-----	.60	5.00	50.00

POPLAR, LOMBARDY (*Populus Nigra Italica*).

	Each	10	100
4 to 6 feet-----	\$0.40	\$3.50	\$30.00
6 to 8 feet-----	.60	5.00	50.00

RED BUD (*Cercis Canadensis*).

	Each	10	100
3 to 4 feet-----	\$0.50	\$4.00	\$40.00

HACKBERRY.

	Each	10	100
4 to 6 feet-----	\$0.50	\$4.00	\$40.00
5 to 6 feet-----	.75	6.50	65.00
6 to 8 feet-----	1.00	9.00	90.00

Evergreens, Always Beautiful

All of us like beautiful trees, and if they are handsome all the time we like them much better. That is just the case with Evergreens. The soft, lustrous foliage holds its beautiful color from one end of the year to the other.

Evergreen trees have many excellent uses. As specimens on the lawn they create a pleasing appearance almost as soon as planted. In windbreaks they show their greatest value, for they are better adapted for this purpose than other classes of trees.

Plant a double row of Evergreens on the windward side of the house; set them around the barnyard, where they will keep strong winds away from your orchard; plant them to screen undesirable sights away from the house. Evergreens have so many practical uses that a book would be needed to name them all. Look around your place and see where you can use them to advantage.

All Evergreens balled and burlapped without extra charge.

CHINESE ARBOR VITAE (*Thuja Orientalis*)

—A well-known evergreen of great value. It forms an upright conical tree of medium size and is, all things considered, the finest evergreen for screen, being hardy, and easily transplanted. It grows rapidly and with little care and soon forms a beautiful hedge, very dense and perfectly impervious to the sight. It is better adapted for the Middle West than any other evergreen. The State Agricultural College, Manhattan, Kansas, recommends it very highly for planting in Kansas.

	Each	10	100
2 to 3 feet, transplanted	1.00	9.00	80.00
12 to 18-inch, transplanted	\$0.60	\$5.00	\$40.00
18 to 24-inch, transplanted	.80	7.00	60.00

AUSTRIAN PINE (*Pinus Austrica*)—The Austrian or Black Pine is a stout branched tree of rapid growth; branches rather longer in proportion to the trunk than most pines. The elegant whorls of branches are densely clothed with deep blackish-green foliage. It is one of the best pines for forming screens. Perfectly hardy and thrives well in dry soils and upon high bleak hills.

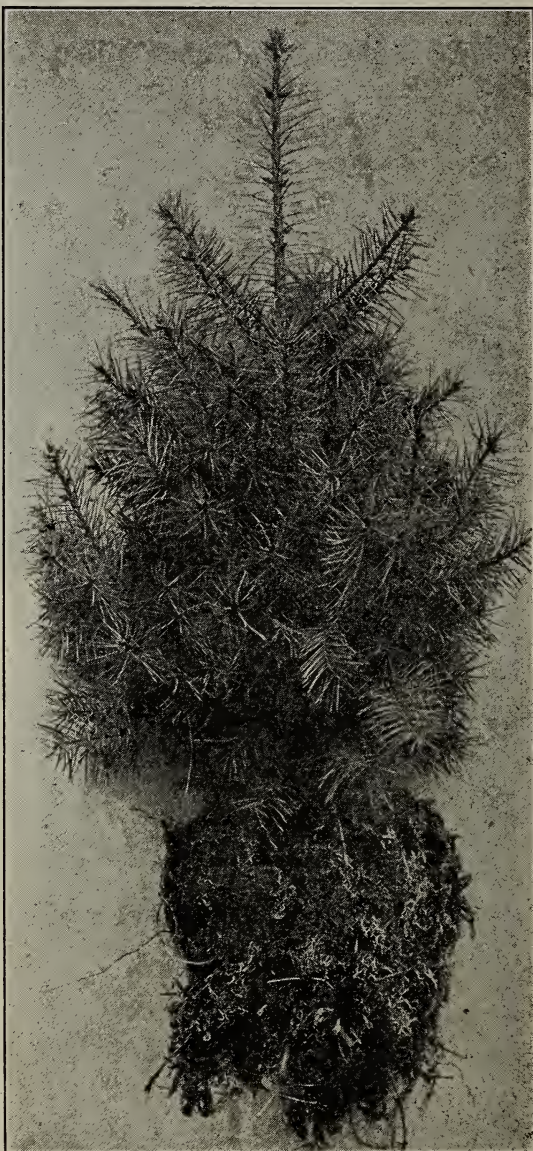
	Each	10	100
12 to 18-inch, transplanted	\$0.60	\$5.00	\$40.00
18 to 24-inch, transplanted	.80	7.00	60.00
2 to 3 feet, transplanted	1.00	9.00	80.00

SCOTCH PINE (*Pinus Sylvestris*)—A dense growing, broad, pyramidal tree with stout, erect shoots and pleasing silver-green foliage. One of the best ornamental forest trees. Grows luxuriantly in most soils.

	Each	10	100
12 to 18-inch, transplanted	\$0.50	\$4.50	\$10.00
18 to 24-inch, transplanted	.60	5.00	45.00
2 to 3 feet, transplanted	.80	7.00	60.00

RED CEDAR (*Juniperus*)—Our Cedars are all raised from native seed gathered especially for us. They are very pretty, of dark green color. Being a native of Kansas, Nebraska and Oklahoma, they are exceedingly hardy, and will stand any amount of dry weather. The very best for windbreaks.

	Each	10	100
12 to 18-inch, transplanted	\$0.60	\$5.00	\$40.00
18 to 24-inch, transplanted	.80	7.00	60.00
2 to 3 feet, transplanted	1.00	9.00	80.00



PINE BALLED WITH EARTH

Forest Trees for Fence Posts

It seems to us that our prairie farmers are not planting enough forest trees. Carload after carload of fence posts alone are shipped to the prairie countries every year, and the farmers are paying large sums of money for something that they could just as well raise for themselves; and very cheaply at that.

The Bureau of Forestry at Washington, D. C., in the last few years did a great deal to encourage the farmer to plant forest trees, and showed them what and how to plant. Still a large percentage of our prairie farmers are almost without any trees, and very few have planted systematically, and are taking the right care of them. The large railroad companies have seen the point long ago, and have planted large forests of trees suitable for their purposes. Railroad corporations are shrewd business people, and if it pays them to raise their own ties, telegraph poles and bridge timbers, we cannot see why it must not be a good investment for our prairie farmers to raise their own fence posts and fuel.



CUTTING POSTS IN A CATALPA GROVE

It is a very easy matter, and with a little care a good grove can be had on a farm with very little expense. Almost any land, even when stony or sandy, will grow trees of some kind. Before setting the trees, plow your land deep and harrow it well, about the same as you would for corn. We would advise using one or two-year-old seedlings. They root readily, and can be cultivated the first year with a double corn cultivator. Care should be taken, however, to keep the ground level.

BEST TREES FOR FENCE POSTS and suitable for Texas, Oklahoma, Missouri, Kansas and Nebraska are:

BLACK or YELLOW LOCUST—This is a very fast grower, surpassed in quick growth only by the Cottonwood. The tree grows straight, forms good tops, has small thick thorns. The blossoms are white and the seed pods look like small string beans. It is a native anywhere south of Nebraska; is often seen growing wild along the streams. The wood is very durable—fence posts lasting almost as long as Red Cedar.

CATALPA SPECIOSA—Of this variety only the Speciosa or Hardy Catalpa, should be planted for timber. It has a very smooth bark, large broad leaves, and quite showy flowers, growing in pyramidal clusters. It grows very fast, and the wood is probably the most durable for fence posts. In Bulletin No. 73 of the Forestry Division of the Department of Agriculture a picture is shown of a Catalpa post which was in the ground 38 years.

RUSSIAN MULBERRY—Another good tree for fence posts. It grows reasonably fast; will make posts in 8 to 10 years, which are very strong and durable.

OSAGE ORANGE—Is not as rapid in growth as Catalpa or Locust, but it will make long-lived posts, as a post 6 inches in diameter will last a lifetime. It makes an unusually good defense hedge; will turn any stock.

BLACK LOCUST		100	1000
12 to 18-inch	-----	\$1.25	\$10.00
18 to 24-inch	-----	1.50	12.00

CATALPA SPECIOSA		1.25	10.00
12 to 18-inch	-----	1.25	10.00
18 to 24-inch	-----	1.50	12.00

RUSSIAN MULBERRY		1.25	10.00
12 to 18-inch	-----	1.25	10.00
12 to 18-inch	-----	1.50	12.00

OSAGE HEDGE		1.50	10.00
One-year, nine plants	-----	1.50	10.00

Why Plant a Hedge?

Fences are all right to keep the cows out of the corn, but they are distinctly out of place on the home grounds. What you want between your grounds and those of your neighbor is a hedge of Privet or Spirea. Not only does the hedge look better than a fence but it is permanent. A fence rots or rusts away, and after a few years must be replaced. A hedge remains year after year, and increases in value and beauty with each succeeding season even if not attended to. If a Privet Hedge is trimmed once or twice a year, it will grow dense clear to the ground and make a tight barrier to all animals.



CALIFORNIA PRIVE THEDGE

CALIFORNIA PRIVET (*Ligustrum*) — No plant has come more rapidly and deservedly into public favor. Is of vigorous growth, has glossy, dark green foliage, keeping its color until after Christmas; almost evergreen. One of the most beautiful plants in existence. There is no other hedge that will equal the California Privet for the purpose, becoming more beautiful each year. A quick, strong growing shrub, yet easy to control by use of shears or knife to any desired shape. Fine for hedges between city lots or large rural grounds, parks, cemeteries, in single clumps or with other shrubs; also as screens to out-buildings, fences,

etc. Price, 12 to 18-inch plants, each 10c; 10 for 85c; 100 for \$7.50. 18 to 24-inch plants, each. 15c; 10 for \$1.25; 100 for \$10.00.

RUSSIAN MULBERRY—It is well adapted for hedges or screens. Must be pruned often. See complete price list under Forest Tree Seedlings.



SPIREA VAN HOUTTEI (BRIDAL WREATH)

LILACS — These make a very attractive hedge. Plants about 12 to 15 inches high. \$25 per 100.

SPIREA VAN HOUTTEI — This is the best plant for an ornamental hedge that we know of. Plants for hedges should be set 10 inches apart. 12-inch plants, suitable for hedges \$30 per 100.

Some Shrubs that Bloom

In corners of the grounds, at curves in the walk and driveways, and at the house foundation are excellent places to plant shrubs. They should always be in groups, unless their ultimate size will be quite large. Lilacs may be used in specimen plantings, but low-growing shrubs, such as Barberry, the Spireas, etc., should be set in clumps. In grouping it is always good policy to plant the taller growing varieties back of the lower sorts. This gives a "step-down" effect and seems to join the house to the lawn.

DEUTZIA, PRIDE OF ROCKESTER—Flowers appear in June; double, slight tinged with rose. Each 50c; 10 for \$4.00.

ELDER, GOLDEN (S. Nigra Aurea)—Bright yellow foliage. Each, 50c; 10 for \$4.00.

GOLDEN BELL, DARK GREEN (F. Viridissima)—Dark green foliage. Each, 50c; 10 for \$4.00.

HONEYSUCKLE, JAPANESE BUSH—A spreading shrub often 5 feet tall. Flowers in early spring. Each, 50c; 10 for \$4.00.

HONEYSUCKLE, TARTARIAN (L. Tartarica)—A shrub 8 to 10 feet tall with bright green foliage, white or pink blooms in late spring. Each, 50c; 10 for \$4.00.

HYDRANGEA, PANICULATA GRANDIFLORA (Large flowered)—A beautiful shrub; blooms from late July to October. Color white, changing to pink or purple. A desirable shrub for planting as a single specimen on the lawn, for massing in the border, or for hedges or screens. Each, 50c; 10 for \$4.00.

INDIAN CURRANT (Symphoricarpos Vulgaris)—Produces a wealth of deep red berries which hang all winter. Each, 50c; 10 for \$4.00.

LILAC, WHITE (Syringa Vulgaris). Each, 75c; 10 for \$6.00.

LILAC, PERSIAN RED—Each, 75c; 10 for \$6.00.



HYDRANGEA, PANICULATA GRANDIFLORA

MOCK ORANGE, GORDON'S (P. Gordonianus)—A native of Oregon and Washington. Flowers white, in racemes; blooms later than other varieties. Each, 50c; 10 for \$4.00.

ROSE OF SHARON (Althea Frutex, or Hibiscus Syriacus)—These are double and single-flowered forms in varying colors. We offer a mixture that will be of great value for hedge planting or massing. Each, 50c; 10 for \$4.00.

SMOKE TREE (Rhus Cotinus)—Flowers pale purple; when mature they have a peculiar fluffy aspect, giving the appearance of smoke. Each, 60c; 10 for \$5.00.

SNOWBALL (Viburnum Molle)—Darker green foliage and stronger growth than the Arrow-wood. Each, \$1.00; 10 for \$7.50.

SNOWBERRY (Symphoricarpos Racemosus)—Flowers pinkish or white, remaining nearly all winter. Each, 50c; 10 for \$4.00.

SPIREA ANTHONY WATERER—Bright, rosy crimson flowers, in dense clusters. Each, 50c; 10 for \$4.00.

SPIREA BALLARDI—An upright medium-sized pink flowered spirea. Each, 50c; 10 for \$4.00.

SPIREA VAN HOUTTEI—The well-known Bridal Wreath. Long branches, densely covered with pure white flowers. Each, 50c; 10 for \$4.00.

WEIGELIA ROSEA—Large, showy rose-colored flowers, produced freely in spring. Each, 50c; 10 for \$4.00.

FLOWERING ALMOND—A very pretty dwarf shrub with very double pink flowers that bloom in May. Each, 50c; 10 for \$4.00.

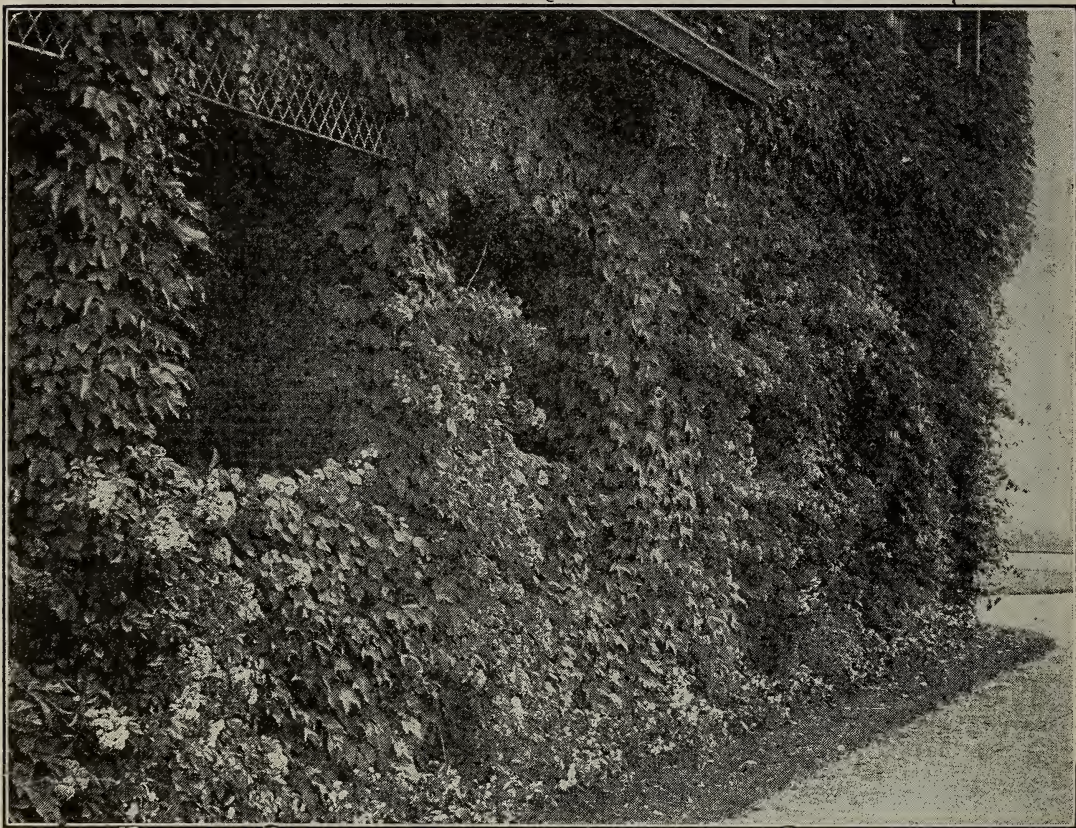
JAPANESE QUINCE (Red Cydonia) **FIRE-BUSH**—Very showy and one of the earliest shrubs to bloom, the flowers appearing before the leaves fully develop. As a harbinger of spring the Japan Quince deserves a prominent place on the lawn when its bright red flowers can be seen to advantage. 50c each, \$4.00 for 10.



DEUTZIA

Vines for Ornament

For covering unsightly objects, rocks, etc., vines are always valuable. As porch draperies they keep off the sun and provide a cool, shady place where it is a comfort to sit. For covering walls of buildings they possess a distinct worth, for they take away the base appearance, and give the mellow effect that is usually produced by age alone. Vines are needed at every home of any size to finish up the planting and the house. No porch can be entirely comfortable without them, because they both shade and screen. A half-dozen vines cost so little that everyone should have them adding their beauty to the rest of the planting and to the buildings.



VIRGINIA CREEPER

CLEMATIS PANICULATA—A splendid climber for covering porches and trellises. Flowers snowy white, produced in immense quantities during late summer and autumn. 75c each, \$7.00 for 10.

CLEMATIS JACKMANNI—Velvety purple flowers, with a ribbed bar in each sepal. Probably the most popular of the dark-flowered varieties. \$1.00 each; \$9.00 for 10.

HONEYSUCKLE, HALL'S (*Lonicera Halliana*)—Dark green dense foliage, flowers white, changing to yellow. 50c each; \$4.50 for 10.

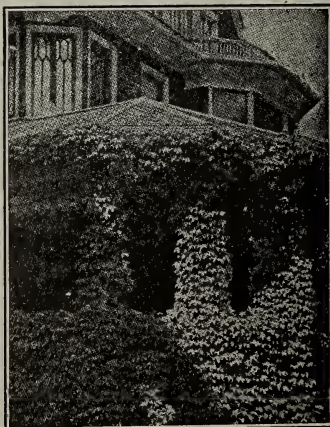
HONEYSUCKLE, RED TRUMPET—A shrubby climber and one of the most satisfactory of all plants. The odd-shaped foliage is showy and attractive, and it produces its bright red, fragrant, trumpet-shaped flowers almost continuously. A splendid vine. 50c each; \$4.50 for 10.

SILK VINE (*Periploca Graeca*)—Twining stems, glossy leaves, and greenish flowers in loose clusters. 50c each; \$4.50 for 10.

VIRGINIA CREEPER (*Ampelopsis Quinquifolia*)—American Ivy. 3-year, 75c each; \$7 for 10.

IVY, ENGLEMANN'S (*Ampelopsis Englemanni*)—Hardy and will stick. Each, 75c; \$7.00 for 10.

WISTERIA, PURPLE (*Wisteria Chinensis*)—A lovely climber, 75c each; \$7.00 for 10.



WISTERIA

Roses For Every Home

Roses thrive best in a medium light clay soil. Before planting prepare the soil by spading and thoroughly working over to a depth of about 18 inches, fill in well-rotted stable manure while spading and work it carefully into the soil. After the plants are set, for best results cut all branches back to within 3 to 4 inches of the top of the ground. The new growth coming out will make a much nicer head than if the plant were not pruned, and the bushes will bloom all the better.

Hybrid Perpetual or June Roses

Two-year, 50c each, \$2.90 for 6.

Parcel Post—See inside front cover.

ANNE DE DIESBACH—This rose was introduced in 1858 and is well known. It is a beautiful shade of carmine-pink; flowers are large, full, and very fragrant. On account of its hardiness it is a fine garden sort.

CAPTAIN CHRISTY—Delicate flesh, rosy center; the blooms are large and last over a long period.

CAPTAIN HAYWARD—Brilliant crimson-carmine; of perfect form; vigorous and free flowering; blooms extra large.

CLIO—These large flowers make clusters of globular form; flesh color, with a rosy pink center; vigorous growers with beautiful foliage.

FRAU KARL DRUSCHKI—Pure white; large long buds; perfectly double, often measuring 5 inches across; petals glossy and durable. It is the best white hybrid perpetual known, and one of the best novelties of recent years. Will grow wherever other roses can be grown.

GENERAL JACKQUEMINOT—Bright crimson; large but not full, although very effective, hardy and fragrant. Famous the world over.

HUGH DICKSON—Deep crimson shaded scarlet; large; full; perfect form; petals smooth, slightly cupped and reflex; very fragrant; free and continuous bloomer. One of the best autumn roses.

MAGNA CHARTA—Pink, with shadings of carmine; large, globular, very profuse bloomer; long, stiff stems; foliage and wood light green with numerous dark spines.

MARGARET DICKSON—White with flesh-colored center; petals very large and shell-shaped; fragrant; a vigorous grower; foliage large; dark green.

MRS. JOHN LAING—Soft pink; large and of

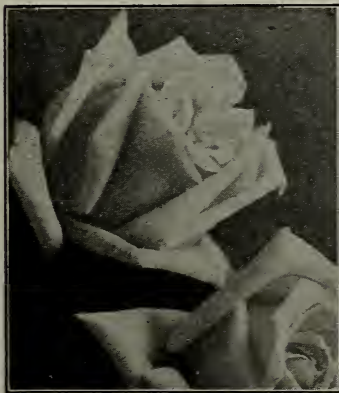


GENERAL JACKQUEMINOT

excellent form; produced on strong stems; fragrant. Flowers continuously in the open ground.

PAUL NEYRON—Color transparent pink; good tough foliage; wood rather smooth; by far the largest variety in cultivation, often measuring 6 inches across. A free bloomer, and a good garden rose.

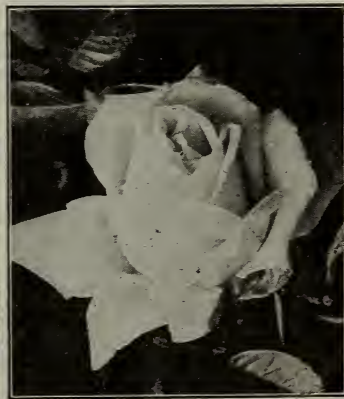
ULRICH BRUNNER—Bright cherry-red, very attractive; flowers of fine form carried well upon the plant; plant hardy, vigorous and re-



FRAU KARL DRUSCHKI



PAUL NEYRON



ULRICH BRUNNER

Everblooming Hybrid Teas

Two-year, 50c each, \$2.90 for 6.

KAISERIN AUGUSTA VICTORIA—Pure white, shading to lemon. Flowers large, finely formed, borne singly on strong upright stems; continues beautiful even when fully expanded. The fragrance is distinct from other varieties, being a combination of Tea and Magnolia. Free flowering and vigorous, with glossy foliage.

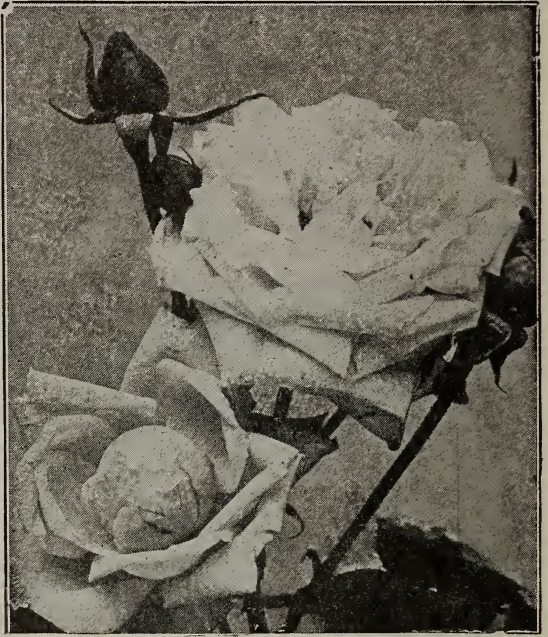
KILLARNEY—Noted for its freedom of bloom and the large size of its intensely fragrant flowers. Buds are large, long and pointed. Color flesh, shade dwwhite, suffused pale pink.

LA FRANCE—Probably the best-known rose in cultivation. Both flowers and buds are of beautiful form and large size; very sweet; color delicate silvery rose, changing to silvery pink. Starts to bloom when very small and continues until stopped by frost.

MME. FRANCISCA KRUGER—Deep shade of copper-yellow flowers which bloom continuously. Excellent for bedding and massing.

CAROLINE TESTOUT—Clear, rich pink fully edged with silvery rose. The blooms are large and handsome, resembling the famous L. France.

GRUS AN TEPLITZ—Bright scarlet, shading to velvet-crimson; fragrant; free grower and most profuse bloomer, lovely foliage. This variety is especially valuable for bedding purposes.



LA FRANCE

Climbing and Rambler Roses

50c each; \$2.90 for 6.

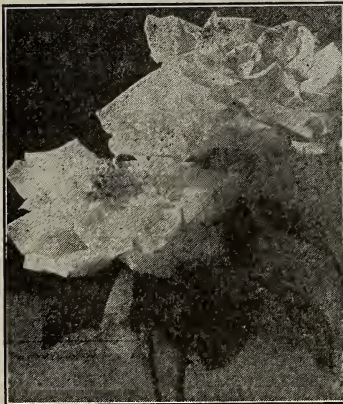
BALTIMORE BELLE—Color flesh, variegated carmine, rose, and white. The flowers are borne in large clusters.

DOROTHY PERKINS—Light pink; flowers are borne profusely in large clusters and are noted for their duration.

CRIMSON RAMBLER—A climbing rose of vigorous habit, strong and rapid growth with beautiful foliage, and produces in abundance clusters of brilliant crimson, semi-double flowers. The qualities which make this rose a great favorite are its clustered form, brightness, abundance of bloom, and the great length of time the flowers remain on the plant without losing brilliancy. No other climbing rose is so well suited for verandas, walls, pillars, and fences. It can be used for massing and bedding if kept trimmed, and for indoor blooming if planted in a pot and kept down to bush form.

TAUSENDSCHON—The flowers are pink when first opening, changing to carmine as they expand. The blooms are borne in large clusters and the individual flower is extremely large, vigorous and thornless.

YELLOW RAMBLER—It is related to the Crimson Rambler, and like it, blooms in large trusses. Flowers very double, very fragrant, of light yellow color.



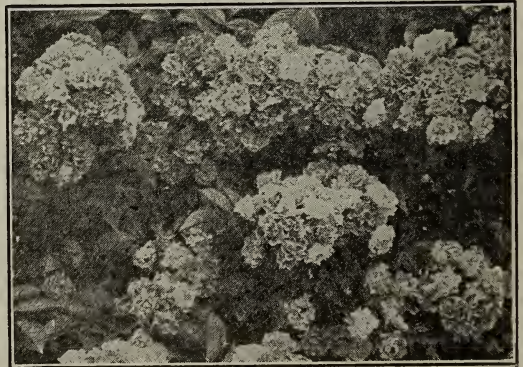
DOROTHY PERKINS

WHITE DOROTHY PERKINS—In general description same as Pink Dorothy. We consider this the only reliable white climber that will give perfect satisfaction. It far surpasses the White Rambler.

EKCELSA (Red Dorothy Perkins)—A grand novelty. Intense crimson scarlet, double flowers in brilliant clusters. Set in glossy shining foliage which never mildews or spots. An intensified Crimson Rambler. Extremely vigorous and handsome.

CLIMBING AMERICAN BEAUTY—A grand novelty of great merit. Cross between American Beauty and an unnamed seedling. Color rosy crimson, similar to its popular parent and with same exquisite fragrance, a quality rarely found in climbing roses. Strong grower, making shoots 10 to 15 feet in a season, hardy as an oak.

BABY RAMBLER—Red, pink and white, 40c each, \$4.00 per dozen.



CRIMSON RAMBLER

General Planting Directions

CARE OF STOCK ON ARRIVAL—All stock should be planted immediately on arrival, but if not convenient to do so, open bundle and heel roots in the ground, covering them thoroughly.

PLANTING—Dig holes twice the size necessary to take in all the roots; throw top soil to one side, and use it for filling around the roots; tread the earth hard after planting. Plant trees 2 inches deeper than they stood in the nursery. Do not mix the soil with water, the earth being sufficiently moist. Too much water when planting is injurious. After planting, and during the summer, sufficient water should be used to keep the earth moist.

PRUNING—The limbs of all fruit and ornamental trees, shrubs, and roses should be cut back two-thirds when planted. Remove all surplus branches from trees, leaving, say, three main stems as a basis for head. Always prune to an outside bud, thus insuring outward growth. Peach trees should be pruned to a whip and a head established the second year, either high or low, as preferred. All roots should be pruned smoothly before planting, cutting off the ends where bruised by digging and shortening others. This is as important as pruning the top.

MULCHING—A most necessary factor in successful planting. Cover a space around the tree or shrub to a distance of 3 feet, using coarse manure—lawn clippings, or grass, are effective for this purpose if manure cannot be secured. The mulching retains moisture, facilitates growth and retards the growth of weeds. When straw or manure is left on the ground all winter, clear a space of 15 inches around the tree to avoid damage from mice.

DRAINAGE—Your time and money are wasted if you plant on undrained soil. All hollows should be avoided when selecting positions for planting.

STAKING—Every ornamental tree should be thoroughly staked and tied with some soft material. Constant motion of the wind kills more newly planted trees than any other cause. They cannot make roots or fibers unless they are perfectly stationary, therefore every planter should give special care to this planting point; you will save your trees.

LABELS—Labels should be removed and some other method adopted for recording varieties. The wires must be cut and damage the limbs.

CULTIVATION—Hoe or cultivate frequently. Nothing can thrive if the weeds are allowed to sap the life of the soil.

A SUMMARY OF ESSENTIALS FOR SUCCESS IS—Careful planting, good soil, mulching, cultivation, drainage, and staking the first season, with the cutting back of branches and trimming ends of roots when stock is planted.

PLANTING AND CARING FOR TREES

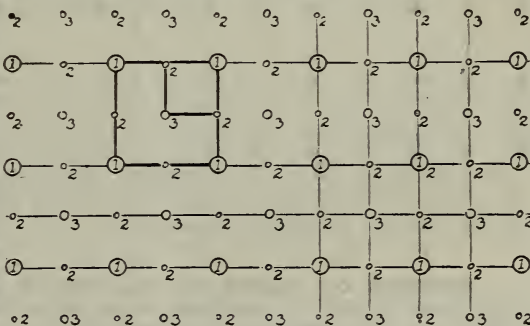
WHEN TO PLANT—It depends on your latitude how early or how late you may plant. Plant dormant trees whenever the ground is not frozen. It can be done as late as May 1, but the earlier the better. Of course, you have to depend a great deal on the weather conditions, the condition of the trees, and the condition of the soil. It is advisable, where winters are not unusually severe, to plant in the fall, mainly on account of the convenience to the planter. There is generally less work in the fall than in the spring, and, again, the trees make an earlier beginning of growth when warm weather comes.

FROZEN TREES—When trees are frozen in shipment, bury the box, with the trees in it, a foot or more deep; that is, cover it with a foot of earth. If that is not possible, put the box in a cellar, where the trees will thaw out slowly. You can leave them there for weeks untouched. After they are thawed out, the roots in each end of the box should be dampened from time to time. When free from frost, trees should be heeled-in at some protected place, if possible. In cold sections, it is a good idea to trench-in trees—roots and branches. In warmer sections, it is enough to cover the roots and lower third of the trunks, and let the tops stick out. They will come out fresh in the spring and with more vitality. A good way is to dig a trench two feet deep, with a long slant toward the south on one side, then put the trees in with tops a foot or more higher than the roots, and cover the entire tree with dirt.

PLANTING PLANS—Many are using three peach trees to one apple tree with success; others prefer using two apple fillers. (See diagram.) We recommend the following apples as fillers in an apple orchard. A very desirable early kind is Yellow Transparent, because the limbs of this variety grow upward. It can be pruned to suit conditions. Grimes Golden is a short-lived tree and begins to bear very early. A little later in season is Wealthy, which is a rather dwarf grower and a fine filler. Duchess of Oldenburg is dwarf, also bears early and ripens early. The first one mentioned has our preference.

Bear in mind that unless fillers are cut in time they will interfere and prevent standards from making as much growth as they should. But the profit from fillers, with proper care, makes it well worth while to plant them. To show our firm belief in fillers we are using them in our own commercial orchards and would plant no other way. (See diagram.)

DYNAMITE is the thing with which to dig holes for new trees, to break up the whole soil 3 to 4 feet deep every few years, and to help renovate old orchards, because it will do these things



Orchard-planting plan, modified-square system. No. 1 trees permanent; No. 2 tree fillers to be removed in about ten years; No. 3 tree fillers to be removed in about twenty years. 40 feet apart each way is a good distance for permanent trees.

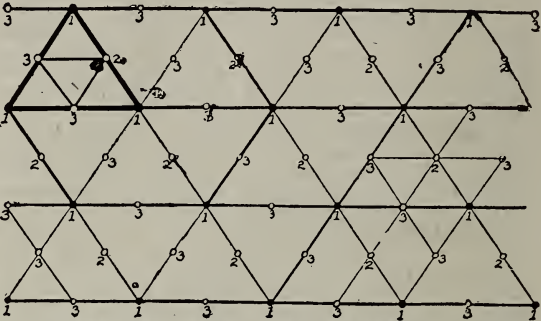
more cheaply and better than they can be done by any other means. If you have fruit trees which seem to be standing still and which do not bear, no matter how big they are, properly explode a charge in the soil around or between them, and the trees will likely get to work. In a bearing orchard, a proper charge midway between trees is always safe and generally effective.

DISTANCES FOR PLANTING—Every orchardist seems to have his own ideas about the distance apart that his trees should stand. The best modern practice shows that 24 to 32 feet for apple trees gives ample space for cultivating, spraying and picking. On the 32-foot line a filler tree can be planted. With the idea that the fillers are to be cut out before they interfere with the growth of the permanent teers. For this purpose use any of the early-maturing peaches: Dutchess, Wealthy, Grimes, York Imperial, and Yellow Transparent apples are desirable because of their upright growth and early-fruiting habit.

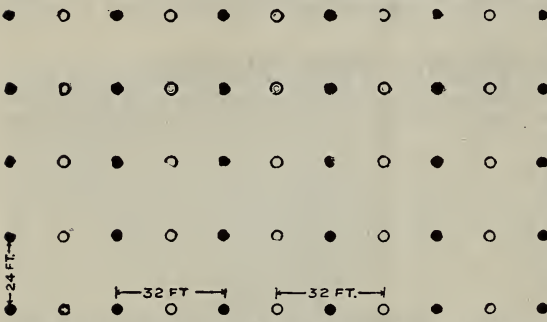
Another common distance is 40 by 40 feet; this has many supporters among practical orchard men, but our experience in our own orchards is in favor of the 24 by 32-foot plan.

The bush fruits—currants, raspberries, etc.—can be used as intercrops and permitted to remain for five or six years. Strawberries, too, are successfully grown between the fruit trees, and many orchardists make good money from a planting of tomatoes. The land between the trees ought to be used, and can be, for at least five years.

When you invest the \$50 to \$100 an acre that it takes to plant an orchard and care for it five years, you want to make it pay as much as possible and as quickly as possible. It is a plain business proposition. Because of this, we say plant two or three of the best-paying varieties and then grow crops between the rows. We advise every planter of an apple orchard to put peach trees between the



Orchard-planting plan, diagonal system. No. 1 trees permanent; No. 3 tree fillers to be removed in about ten years; No. 2 tree fillers to be removed in twenty years.



This planting plan is one of the simplest and best we have seen. The permanent trees are planted 24 by 32 feet, with a filler tree in the 32-foot space. This gives 54 permanent trees and 54 fillers to the acre.

apple trees as fillers for the first eight or ten years, if you want to grow peaches and the land is suited to peaches. If the land is not adapted for peaches, plant Apple fillers and grow beans, peas, tomatoes, early potatoes, or other vegetables between the rows of trees for two or three years. The use of fillers and intercrops will make your orchard pay from the very beginning. Early bearing of fruit trees depends somewhat on treatment but to a larger extent on the varieties planted. York Imperial and Yellow Transparent, especially, will bear abundantly when they are from four to six years old.

CULTIVATION OF ORCHARDS—Cultivation keeps the trees supplied with available plant-food and saves moisture. Young orchards of any kind always should be cultivated clean, from early spring until in July. Plow or tear up the soil as soon as ground is dry enough to work, harrow after every rain, and every week or ten days until it is time to sow the cover crop or mulch for winter. Keep them hustling.

NUMBER OF TREES OR PLANTS TO AN ACRE—The following table will show how many trees or plants are required for an acre at any distance apart:

Feet apart	Square method	Triangular method	Feet apart	Square method	Triangular method
40	27 trees	31 trees	10	435 trees	505 trees
35	35 trees	40 trees	8	680 trees	775 trees
30	50 trees	55 trees	6	1210 trees	1600 trees
25	70 trees	80 trees	5	1745 trees	2010 trees
20	110 trees	125 trees	4	2722 trees	3145 trees
18	135 trees	155 trees	3	4840 trees	5590 trees
15	195 trees	225 trees	2	10890 trees	12575 trees
12	305 trees	350 trees	1	43560 trees	50300 trees

Trees sometimes can be planted to advantage farther apart one way than another. To do this, you have to work out the plan for your own orchards. This plan works best on steep hills. The rows should follow the lines of the hill to make driving easier. No rules can be laid down for hillside arrangement. Use some modification of the plans given here. (See diagrams.)

FERTILIZING—Stable manure is one of the best fertilizers for feeding a young growing orchard. Scatter the manure on top of the ground around the trees, at least as far from the trunks as the branches extend so that the fine fibrous roots can take up the fertilizing elements.

Potash, nitrogen, and phosphoric acid are the plant-foods that have to be supplied. Nitrogen usually is best obtained through leguminous cover-crops. Potash and phosphorus have to be supplied in chemical form.

Nitrogen is the growing material, making wood and size in fruit; potash goes into fruit largely, making flavor and color; phosphoric acid goes into wood and seeds, but only a fifth as much of it is used as of potash.

SPRAYING

Spraying is a vital necessity if money is to be made from fruit. It doesn't pay to miss one season, even if enemies are not visible. Spraying has an invigorating effect on trees, besides controlling enemies.

There are three classes of enemies spraying will control—chewing insects, sucking insects, and fungi. Each class requires a different remedy, but the remedies can be combined most of the time.

On account of the life-habits of enemies, often only two to seven days are available for any one spraying. Do the work then. Put the material on with force and cover every inch of bark and leaf.

Get a sprayer that is big enough, that will give one hundred to two hundred and fifty pounds of air-pressure, that is adapted to your land and trees, and that is durable. Get a power outfit, if possible, for it does better work than a hand-pump can.

The spraying programme ordinarily resolves itself into two, three, or four applications—one while trees are dormant, with lime-sulphur solution, and the others on blossoms and fruit with self-boiled lime-sulphur, or diluted lime-sulphur, with arsenate of lead added, or maybe with bordeaux and lead. All applications must be guided by careful study.

Borers will attack fruit trees in spite of all we can do and kill many trees if left alone. Trees must be gone over several times each year, and should be gone over each April and August. Spraying and painting with lime-sulphur sediment will help in keeping down the numbers of borers.

FORMULAS FOR SPRAY MIXTURES

1. CONCENTRATED LIME-SULPHUR—Home made:

Best stone lime (at least 95 per cent calcium oxide) 50 lbs.

Sulphur (any kind finely ground, 98 per cent pure) 100 lbs.

Water, 50 gals.

Heat 20 gals. of water in an iron vat or by steam in barrels; add stone lime and sulphur gradually, to make a total of about 55 gals. Boil for one hour. For dormant spraying, dilute at the rate of 1 to 9. For summer spray, dilute 1 to 40.

Commercial—Lime-sulphur solution may be purchased from various firms. It should be diluted as above. Soluble oils may be substituted 1 to 15 for dormant spray.

2. SELF-BOILED LIME-SULPHUR:

Flowers of Sulphur ----- 8 lbs.

Stone lime of good quality ----- 8 lbs.

Water ----- 50 gals.

Start the lime slaking with a little water. (Use hot water if lime is slow acting.) As soon as the lime begins to slake rapidly, add the sulphur and stir continuously, adding just enough water from time to time to form a thin paste and to allow the mixture to boil violently for from three to five minutes. Add cold water to prevent any further action of the lime. Strain at once into spray tank. Add water to make 50 gals. Larger quantities in the same proportion may be made, but greater care will be required to prevent the mixture from becoming too hot. This red material will injure the foliage and fruits. When applying this spray, a good agitator is essential. Atomic sulphur, a commercial product, used at the rate of 5 lbs. to 50 gals., may be substituted.

3. BORDEAUX MIXTURE:

Copper sulphate (Blue-stone) ----- 4 lbs.

Stone lime of good quality ----- 4 lbs.

Water ----- 50 gals.

Dissolve the blue-stone by suspending it in a bag near the surface of a few gallons of water contained in a wooden or earthen vessel. Slake the lime and add several gallons of water so as to make milk of lime. Pour the blue-stone into the spray tank and add enough water to make 20 to 30 gals.; then strain the milk of lime into the barrel, agitating the mixture vigorously. Add water to make 50 gals. Use immediately.

STOCK SOLUTIONS:

Dissolve blue-stone at rate of 1 lb. to 1 gal. water. Slake lime and dilute at rate of 1 lb. to 1 gal. Keep in separate covered containers until ready to make bordeaux according to above formula. Prepared bordeaux, either dry or in paste, or Pyrox may be substituted.

4. ARSENICALS:

Arsenate of lead is the standard stomach poison. It is furnished in both the powder and paste form. The powder is much the easier to use as it can be used dry, as a dust, or combined with liquids. The paste is not easily kept for any length of time because of evaporation, and hence cannot be held over from one season to another as easily as the powder.

Arsenate of lime is effective for truck crops and is about two cents cheaper per pound. Arsenite of zinc is a quick-acting poison, valuable for truck-crop work.

All of the above powdered materials should be used at the rate of 1 lb. per 50 gals. of spray for the ordinary insects. Beetles usually require 1½ lbs. per 50 gals. Twice as much paste would be required in each case. Any of the poisons may be combined with the spray for diseases.

6. NICOTINE SPRAYS:

Nicotine in various forms and under such trade names as Black-Leaf 40, may be purchased from manufacturers, and should be used as directed in the schedule for aphids.

7. FINE-TAR CREOSOTE EMULSION:

Pine-tar creosote ----- 1 gal.

Caustic soda ----- 2-3 lbs.

Water ----- 11 gals.

Dissolve the caustic soda in 1 gal. water in a large vessel; stir in vigorously the creosote, add 11 gals. water, to make an 8 per cent solution and strain into spray barrel. Used for woolly aphids.

8. WORMING PEACH TREES:

The knife and a flexible wire is still the best method for combating the peach tree borer. Pull the earth away from the tree crowns one day prior to worming. This allows the tree to dry and shows up the new "castings" or "frass" to good advantage, thus facilitating the finding of the borers. Take out the borers in May, mound up the earth, and worm again in October, leaving the earth level around the tree.

SPRAY CALENDAR

PLANT	INSECTS OR DISEASES	REMEDY	FIRST APPLICATION	SECOND APPLICATION	THIRD APPLICATION	REMARKS
APPLE	Blackspot Canker	Bordeaux, double strength	Immed'y after leaves fall	Three weeks later		
	Bud Moth	Lime-Sulphur	Just as buds are swelling	Ars'te of Lead twice as buds open, once after petals fall		
	Codling Moth and Scab	Paris Green, 1 lb. to 100 gallons of water	Within one week after blossoms fall	Week or ten days	Two weeks later	A fourth application will pay. If bitter rot is present, a fifth application should be made.
	Curculio. See plum	Arsenate of Lead	After blossoms fall	Repeat in ten days	10 days later	
	Flathead Borer	Dig out worms in fall and spring with knife. During growing season whitewash base of trunk or apply Carbon Bisulphide.				
	Green Aphis	Lime-Sulphur	When the leaves are off the tree	Kerosene emulsion effective when insects appear. Repeat before leaves curl if necessary. Cutting off twigs with eggs in winter usually suffices for young trees		
	San Jose Scale	Lime-sulphur or soluble oils as recommended	Early in November	In the spring before the buds burst	The San Jose scale cannot be destroyed in one treatment. If only a few trees are affected burn them	
	Twig Borer	Lime-Sulphur	When buds swell in spring	Arsenate of Lead in summer when the worms appear		(If Woolly Aphis is present on roots, dip stock in 1-15 solution of recommended prepared oil compound, applied May to August or remove the soil and treat with finely ground tobacco placed around base of tree; use 2 to 5 lbs. to a tree)
	Woolly Aphis, Oyster Shell and Scurfy Scale	Soluble oils as recommended. Kerosene emulsion, 1 part to 12 parts water	Use when young hatch in early spring	For summer treatment use 10 per cent kerosene or dilute Lime Sulphur		Watch the plant closely in spring and begin spraying as soon as worms are discovered. Other Currant Pests removed by cutting out and burning the infested stems
	Black Aphis	Kerosene emulsion or whaleoil soap. Soluble oils as recommended.	When the insects appear and before they curl the leaves	Just as fruit begins to ripen, with copper acetate 8 oz. to 50 gals. water. Before 1st spraying gather and burn mummified fruits. Thin green fruit till they are separate. Prune trees so as to admit much sunlight		
CHERRY	Brown Rot	Bordeaux	Just before blossoms open	After the blossoms fall		
	Slug	Arsenate of Lead. Paris road dust or ashes, when the insects appear.	Green or dust with lime, when the insects appear.	Ten days later. Heliothere for worms; quassia and tobacco for Aphids. Repeat second time when necessary		
CURRANT	Aphis	10% Kerosene emulsion	Early before leaves roll	Repeat at intervals of ten days till fruit is picked		
GOOSEB'Y	Mildew	Potassium sulphide, 1 oz. to 2 gallons water	Just as buds burst	Repeat in ten days	Repeat in two weeks	
GRAPE	Mildew and Rot	Bordeaux, or dilute Lime-Sulphur	When buds first swell	Repeat in ten days		
PEACH	Leaf Curl & Rot	Lime-Sulphur	Just before the buds open	After blossoms fall		
	Mildew	Lime-Sulphur	Before buds burst			
	Peach Tree Borer	Dig out worms in fall and spring with a knife. During growing season whitewash base of trunk.				
	Bliester Mite	Lime-Sulphur, 1 gal. to 10	When leaves are off tree	Add more soap than the formula calls for. Repeat 10 to 12 days later if necessary		
PEAR	Cottony Scale	Kerosene emulsion	When insects become cottony (May)	While the last blossoms are falling. Use a vermorel nozzle. Do not drench the trees		
	Scab	Lime-Sulphur or Bordeaux with Arsenate of Lead	Just before blossoms open	Repeat in ten days	10 days later recommended solution if Aphis is present	
PLUM	Blight & Curculio	Arsenate of Lead, 1½ lbs. to 50 gallons water	After blossoms fall			
RASPB'Y		Bordeaux or Lime-Sulphur	When buds begin to swell	Two weeks later (when not in flower) repeat second		
BLACKB'Y	Fungous Diseases	or Soluble oils as recommended				
DEWB'Y						

*Same treatment for Peach

†Same treatment for Plum

‡Same treatment for Pear

§Same treatment for Cherry

If scale insects are present, use lime-sulphur or recommended compound

Dilute the mixture to half the strength given in the formula—100 gallons of water instead of 50

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A STATELY HOME

The planting of this home is simple and effective. The shrub in flower is Philadelphia. The large shrubs on either side in the planting of the porte cochere are Lilacs. The border of the mass planting is composed of Barberry Thunbergii. The vines on the porte cochere are Wisteria; those on the house are Ampelopsis.



A RESIDENCE WITH PERSONALITY

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